6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R05-OAR-2011-0597; FRL-9900-29-Region 5]

Approval and Promulgation of Air Quality Implementation Plans; Ohio; Redesignation of the Columbus Area to Attainment of the 1997 Annual Standard for Fine Particulate Matter

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to grant, under the Clean Air Act (CAA), a redesignation request and approve a State Implementation Plan (SIP) revision request submitted by the state of Ohio on June 3, 2011, and supplemented on April 30, 2013. The Ohio Environmental Protection Agency (OEPA) has requested the redesignation of the Columbus, Ohio (OH) area to attainment of the 1997 annual fine particulate (PM2.5) National Ambient Air Quality Standard (NAAQS or standard). The Columbus, Ohio area (Columbus area) includes Coshocton, Delaware, Licking, Fairfield, and Franklin Counties. EPA is proposing to determine that the Columbus area has attained the 1997 annual PM2.5 NAAQS and to approve the state's redesignation request. EPA is proposing to approve related Ohio SIP revisions, including the state's plan for maintaining attainment of the 1997 annual PM2.5 NAAQS in the Columbus area through 2023, the state's 2022

Nitrogen Oxides (NOx) and PM2.5 Motor Vehicle Emission Budgets (MVEBs) for the Columbus area (which EPA is also proposing to find adequate), and 2005 NOx, Sulfur Dioxide (SO_2), and primary PM2.5 and 2007 Volatile Organic Compound (VOC) and ammonia emission inventories for the Columbus area. In the context of this proposal to redesignate the Columbus area, EPA addresses a number of additional issues, including the effects of two decisions of the United States Court of Appeals for the District of Columbia (D.C. Circuit or Court): the Court's August 21, 2012, decision to vacate and remand to EPA the Cross-State Air Pollution Rule (CSAPR); and the Court's January 4, 2013, decision to remand to EPA two final rules implementing the 1997 annual PM2.5 standard.

DATES: Comments must be received on or before **[**INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER**]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2011-0597, by one of the following methods:

- http://www.regulations.gov: Follow the on-line instructions for submitting comments.
- *E-mail*: Aburano.Douglas@epa.gov.
- *Fax:* (312) 408-2279.
- *Mail:* Douglas Aburano, Chief, Attainment Planning and Maintenance Section (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.

- *Hand Delivery:* Douglas Aburano, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, 18th Floor, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office's normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 AM to 4:30 PM, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R05-OAR-2011-0597. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that

is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects and viruses. For additional instructions on submitting comments, go to section I of the SUPPLEMENTARY INFORMATION section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the U.S. Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 AM to 4:30 PM, Monday through Friday, excluding Federal holidays. We recommend that you telephone Edward Doty at (312) 886-6057 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Edward Doty, Environmental Scientist, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6057, or Doty.Edward@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

2. Emission Reductions

a. Ohio's Demonstration That Significant Emission Reductions Have Occurred in the Columbus Area and In Upwind Areas

b. VOC and Ammonia Emission Reductions

c. Conclusions Regarding Emission Reductions Between 2005 and 2008 In the Columbus Area

D. Does Ohio Have a Fully Approvable PM2.5 Maintenance Plan Pursuant to Section 175A of the CAA for the Columbus Area?

1. What Is Required in a Maintenance Plan?

2. Attainment Inventory

3. Demonstration of Maintenance

a. State Demonstration of Maintenance

b. CAIR and CSAPR

i. Background – Effect of the August 21, 2012, D.C. Circuit Decision Regarding EPA's CSAPR

ii. Maintenance Plan Precursor Evaluation Resulting From Court Decisions

c. EPA's Conclusion for Ohio's Maintenance Demonstration

4. Monitoring Network

5. Verification of Continued Attainment

6. Contingency Plan

7. Provision for Future Update of the Annual PM2.5 Maintenance Plan

I. What Should I Consider As I Prepare My Comments for EPA?

When submitting comments, remember to:

1. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).

2. Follow directions – EPA may ask you to respond to specific questions or to organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

4. Describe any assumptions and provide any technical information and/or data you used.

5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

6. Provide specific examples to illustrate your concerns, and suggest alternatives.

7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

8. Make sure to submit your comments by the comment period deadline identified in the proposed rule.

II. What Actions Is EPA Proposing?

EPA is proposing to take several actions related to the redesignation of the Columbus area to attainment of the 1997 annual PM2.5 NAAQS. EPA is proposing to determine that the Columbus area has attained the 1997 annual PM2.5 NAAQS based on quality assured, certified 2008-2012 air quality data.

EPA is proposing to find that the state of Ohio and the Columbus area meet requirements for redesignation of the Colubmus area to attainment of the 1997 annual PM2.5 NAAQS under section 107(d)(3)(E) of the CAA. EPA is, thus, proposing to grant Ohio's request for a redesignation of the Columbus area to attainment of the 1997 annual PM2.5 NAAQS.

EPA is proposing to approve Ohio's PM2.5 maintenance plan for the 1997 annual PM2.5 NAAQS for the Columbus area as a revision to the Ohio SIP, meeting the requirements of section

175A of the CAA. The PM2.5 maintenance plan uses projected emissions data for 2022, but EPA believes that the plan suffices to demonstrate maintenance of the 1997 annual PM2.5 NAAQS in the Columbus area through 2023. The state of Ohio commits to revise this maintenance plan to cover an additional 10 years within 8 years after EPA approves the redesignation of the Columbus area to attainment of the 1997 annual PM2.5 NAAQS.

EPA is proposing to approve Ohio's 2022 PM2.5 and NOx MVEBs for the Columbus area. In addition, EPA is proposing to find these MVEBs as adequate for purposes of transportation and general conformity demonstrations and determinations.

Finally, EPA is proposing to approve 2005 primary PM2.5, NOx, and SO_2 emission inventories and 2007 VOC and ammonia emission inventories for the Columbus area as satisfying the requirement of section 172(2)(3) of the CAA for a current, accurate, and comprehensive emission inventory.

III. What Is the Background for These Actions?

Fine particulate pollution can be emitted directly from a source (e.g., primary PM2.5, organic particles, crustal matter, and elemental carbon) or formed secondarily through chemical reactions in the atmosphere involving precursor pollutants emitted from a variety of sources. Sulfates are a type of secondary fine particulates formed from reactions involving SO_2 emissions from power plants and industrial facilities.

Nitrates, another common type of secondary particulate, are formed from combustion emissions of NOx (primarily NO and NO_2) from power plants, mobile sources, and other combustion sources. Emitted precursors of general concern in the secondary formation of PM2.5 are SO_2, NOx, VOC, ammonia, and primary PM2.5, all of which can react in the atmosphere with other compounds to form fine particulates locally (within or immediately downwind of significant source areas) and adding to PM2.5 levels produced through local primary PM2.5 emissions and transported PM2.5 and PM2.5 precursors.

The first air quality standards for PM2.5 were promulgated on July 18, 1997, at 62 FR 38652. EPA promulgated an annual standard at a level of 15 micrograms per cubic meter ($\mu g/m^3$) of ambient air, based on a three-year average of the annual mean PM2.5 concentrations at each monitoring site (the site's PM2.5 design value for the annual standard). In the same rulemaking, EPA promulgated a 24-hour PM2.5 standard at a level of 65 $\mu g/m^3$, based on a three-year average of the annual 98th percentile of 24-hour PM2.5 concentrations at each monitoring site.

On January 5, 2005, at 70 FR 944, EPA published air quality area designations for the 1997 annual PM2.5 standard based on air quality data for calendar years 2001-2003. In that rulemaking, EPA designated the Columbus area as nonattainment for the 1997 annual PM2.5 standard.

On October 17, 2006, at 71 FR 61144, the EPA retained the annual PM2.5 standard at 15 µg/m^3 (2006 annual PM2.5 standard), but revised the 24-hour PM2.5 standard to 35 µg/m^3, based again on the three-year average of the annual 98th percentile of the 24-hour PM2.5 concentrations. In response to legal challenges of the 2006 annual PM2.5 standard, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) remanded this standard to EPA for further consideration. See *American Farm Bureau Federation and National Pork Producers Council, et al.* v. *EPA*, 559 F.3d 512 (D.C. Cir. 2009).

On January 15, 2013 (78 FR 3086), EPA finalized a rule revising the annual PM2.5 standard to 12 µg/m^3 based on current scientific evidence regarding the protection of public health. EPA has not established attainment and nonattainment areas for this revised annual standard and is not addressing this standard in this proposal.

Since the Columbus area is designated as nonattainment for the 1997 annual PM2.5 standard and not for other PM2.5 standards, today's proposed action addresses redesignation of this area for only this standard.

On September 14, 2011, EPA issued a final determination that the Columbus area had attained the 1997 annual PM2.5 standard by the applicable attainment date (76 FR 56641). This determination of attainment for the 1997 annual PM2.5 standard

was based on quality-assured annual-averaged PM2.5 concentrations for PM2.5 monitoring sites in Franklin County for the periods of 2007-2009 and 2008-2010. Based on our review of complete, quality-assured, and state-certified ambient PM2.5 monitoring data from 2010-2012, we are proposing to determine that the Columbus, Ohio area continues to attain the 1997 annual PM2.5 NAAQS.

On June 3, 2011, OEPA submitted a request for EPA to redesignate the Columbus area to attainment of the 1997 annual PM2.5 NAAQS and to approve a SIP revision containing emission inventories and PM2.5 maintenance plan for the area. The maintenance plan also includes 2022 MVEBs for the Columbus area. In a supplemental submission to EPA on April 30, 2013, the OEPA submitted 2007 VOC and ammonia emission inventories to supplement the 2005 primary PM2.5, SO_2, and NOx emission inventories, included in the June 3, 2011, redesignation request, to meet the emission inventory requirement of section 172(c)(3) of the CAA.

In this proposed rule, EPA takes into account two recent decisions of the D.C. Circuit. In the first of the two Court decisions, the D.C. Circuit, on August 21, 2012, issued its decision in *EME Homer City Generation* v. *EPA*, 696 F.3d 7 (D.C. Cir. 2012), which vacated and remanded CSAPR and ordered EPA to continue administering CAIR "pending . . . development of a

valid replacement." *EME Homer City Generation, 696 F.3d* at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013.[1] In the second decision, on January 4, 2013, in *Natural Resources Defense Council* v. *EPA*, the D.C. Circuit remanded to EPA the "Final Clean Air Fine Particle Implementation Rule" (72 FR 20586, April 25, 2007) and the "Implementation of the New Source Rule (NSR) Program for Particulate Matter Less than 2.5 Micrometers ($PM_{2.5}$)" final rule (73 FR 28321, May 16, 2008). 706 F.3d 428 (D.C. Cir. 2013).

IV. What Are the Criteria for Redesignation to Attainment?

The CAA sets forth the requirements for redesignating a nonattainment area to attainment of a NAAQS. Specifically, section 107(d)(3)(E) of the CAA allows for redesignation provided that: (1) the Administrator determines that the area has attained the applicable NAAQS based on current air quality data; (2) the Administrator has fully approved an applicable SIP for the area under section 110(k) of the CAA; (3) the Administrator determines that the improvement in air quality is due to permanent and enforceable emission reductions resulting from the implementation of the applicable SIP, Federal air

[1] On March 29, 2013, EPA and other parties filed petitions in the Supreme Court seeking *certiorari* of the D.C. Circuit's decision in *EME Homer City*. On June 24, 2013, the Supreme Court consolidated the petitions and granted certiorari. The Supreme Court's decision to grant the petitions is not a decision on the merits but instead a decision to review the case on the merits. As such, it does not alter the current status of CAIR or CSAPR. At this time, CAIR remains in place.

pollution control regulations and other permanent and enforceable emission reductions; (4) the Administrator has fully approved a maintenance plan for the area meeting the requirements of section 175A of the CAA; and, (5) the state containing the area has met all requirements applicable to the area for purposes of redesignation under section 110 and part D of the CAA.

V. What is EPA's Analysis of the State's Request?

A. Has the Columbus Area Attained the 1997 Annual PM2.5 Standard?

In a rulemaking published on September 14, 2011, EPA determined that the Columbus area had attained the 1997 annual PM2.5 NAAQS by the applicable attainment deadline for this area. The basis and effect of this determination were discussed in the notices of proposed (76 FR 28393, May 17, 2011) and final (76 FR 56641, September 14, 2011) rulemaking. The determination was based on quality-assured air quality monitoring data for 2007-2009 showing that the area has met the standard. The data have been certified by Ohio.

In this action, we are proposing to determine that the Columbus area continues to attain the 1997 annual PM2.5 NAAQS based on the most recent three years of complete, certified and quality-assured data, and, therefore, we are proposing to update our determination of attainment for the Columbus area. Under

EPA's regulations at 40 CFR 50.7, the annual primary (human health-based) and secondary (environment-based) PM2.5 standards are met when the annual arithmetic mean concentration, as determined in accordance with 40 CFR part 50, appendix N, is less than or equal to 15.0 $\mu g/m^3$ at all relevant monitoring sites in the area. Under 40 CFR part 50, appendix N 4.1, a year of PM2.5 data meets completeness requirements when at least 75 percent of the scheduled sampling days for each quarter have valid data.

EPA has reviewed the ambient air quality monitoring data for the Columbus area consistent with the requirements contained at 40 CFR part 50. EPA's review focused on Columbus area PM2.5 data quality assured and certified by the state of Ohio for the period of 2007-2012 and recorded in the EPA Air Quality System (AQS).

The Columbus area had three PM2.5 monitoring sites with valid, complete annual PM2.5 data for all three-year periods considered here. All of these monitoring sites were located in Franklin County. A fourth PM2.5 monitoring site was located in Franklin County beginning in 2010, but has yet to monitor complete, certified annual mean PM2.5 concentrations for a three-year period. Nevertheless, data measured at this site to date support a finding of attainment.

Table 1 summarizes the three-year average annual mean PM2.5 concentrations (design values) for the three PM2.5 monitoring sites located in Franklin County for the three-year periods of 2007-2009, 2008-2010, 2009-2011, and 2010-2012. These monitors recorded complete PM2.5 data in accordance with criteria set forth by EPA in 40 CFR part 50, appendix N. Available data are considered to be sufficient for comparison to the NAAQS if three consecutive years of data exist.

Table 1 – The Three-Year PM2.5 Design Values For The Columbus, Ohio Area Monitors With Complete, Certified PM2.5 Monitoring Data For 2007-2012

County	Monitor	PM2.5 Three-Year Design Value 2007-2009 ($\mu g/m^3$)	PM2.5 Three-Year Design Value 2008-2010 ($\mu g/m^3$)	PM2.5 Three-Year Design Value 2009-2011 ($\mu g/m^3$)	PM2.5 Three-Year Design Value 2010-2012 ($\mu g/m^3$)
Franklin	39-049-0024	13.0	12.5	12.2	11.9
Franklin	39-049-0025	12.9	12.2	11.9	11.6
Franklin	39-049-0081	11.7	11.3	11.2	11.0

EPA's review of monitoring data from the 2007-2009, 2008-2010, 2009-2011, and 2010-2012 monitoring periods supports EPA's determination that the Columbus area has monitored attainment of the 1997 annual PM2.5 NAAQS for each three-year period considered (the most recent periods with complete, quality-assured, and state-certified annual PM2.5 concentrations for this area). Therefore, EPA proposes to determine that the Columbus area continues to attain the 1997 annual PM2.5 NAAQS, and EPA proposes to renew its determination of attainment for the Columbus area.

B. Has the State of Ohio Met All Requirements of the CAA Applicable for Purposes of Redesignation of the Columbus Area To Attainment of the 1997 Annual PM2.5 Standard?

We are proposing to find that Ohio has met all currently applicable SIP requirements for purposes of redesignation for the Columbus area under section 110 of the CAA (general SIP requirements). We are also proposing to find that the Ohio SIP meets all SIP requirements currently applicable for purposes of redesignation under part D of title I of the CAA, in accordance with section 107(d)(3)(E)(v). We are proposing to find that all applicable requirements of the Ohio SIP, for purposes of redesignation, have been approved, in accordance with section 107(d)(3)(E)(ii) of the CAA. As discussed below, in this proposed rule, EPA is proposing to approve Ohio's 2005 (primary PM2.5, SO_2, and NOx) and 2007 (VOC and ammonia) emissions inventories as meeting the requirements of section 172(c)(3) of the CAA for a comprehensive emissions inventory.

In making these proposed findings, we have ascertained which SIP requirements are applicable for purposes of redesignation, and have concluded that there are measures in the Ohio SIP meeting these requirements. These measures are approved or will be approved by the time of final rulemaking.

1. Ohio Has Met All Applicable Plan Requirements for Purposes of Redesignation of the Columbus Area Under Section 110 and Part D of the CAA

a. Section 110 General SIP Requirements

Section 110(a) of title I of the CAA contains the general requirements for a SIP. Section 110(a)(2) provides that the implementation plan submitted by a state must have been adopted by the state after reasonable public notice and hearing, and, among other things, must: (1) include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the CAA; (2) provide for establishment and operation of appropriate devices, methods, systems and procedures necessary to monitor ambient air quality; (3) provide for implementation of a source permit program to regulate the modification and construction of a stationary source within areas covered by the plan; (4) include provisions for the implementation of part C, Prevention of Significant Deterioration (PSD), and part D, New Source Review (NSR), permit programs; (5) include criteria for stationary source emission control measures, monitoring and reporting; (6) include provisions for air quality modeling; and (7) provide for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) of the CAA requires that a SIP contain measures to prevent sources in a state from significantly contributing to air quality problems in another state. EPA believes that the requirements linked with a particular nonattainment area's designation are the relevant measures to evaluate in reviewing a redesignation request. The transport SIP submittal requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Thus, we believe that these requirements should not be construed to be applicable requirements for purposes of redesignation.

Further, we believe that the other section 110 elements described above that are not connected with nonattainment plan requirements and not linked with an area's attainment status are also not applicable requirements for purposes of redesignation. A state remains subject to these requirements after an area is redesignated to attainment. We conclude that only the section 110 and part D requirements that are linked with a particular area's designation are the relevant measures we must consider in evaluating a redesignation request. This approach is consistent with EPA's existing policy on applicability of conformity and oxygenated fuels requirements for redesignation purposes, as well as with section 184 ozone transport requirements. See: Reading, Pennsylvania proposed and final rulemakings (61 FR

53174-53176, October 10, 1996, and 62 FR 24826, May 7, 1997); Cleveland-Akron-Loraine, Ohio final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Florida final rulemaking (60 FR 62748, December 7, 1995). See also the discussion on this issue in the Cincinnati, Ohio 1-hour ozone redesignation (65 FR 37890, June 19, 2000), and in the Pittsburgh, Pennsylvania 1-hour ozone redesignation (66 FR 50399, October 19, 2001).

We have reviewed the Ohio SIP and have concluded that it meets the general SIP requirements under section 110 of the CAA to the extent they are applicable for purposes of this redesignation. EPA has previously approved provisions of Ohio's SIP addressing section 110 requirements, including provisions addressing particulate matter, at 40 CFR 52.1870. On December 5, 2007, and September 4, 2009, Ohio made submittals addressing "infrastructure SIP" elements required under CAA section 110(a)(2). EPA proposed approval of the December 5, 2007, submittal on April 28, 2011, at 76 FR 23757, and published final approval on July 14, 2011, at 76 FR 41075. The requirements of section 110(a)(2), however, are statewide requirements that are not linked to the PM2.5 nonattainment status of the Columbus area. Therefore, EPA believes that these SIP elements are not applicable requirements for purposes of review of the state's PM2.5 redesignation request.

b. Part D Requirements

EPA is proposing to determine that, upon approval of the base year emissions inventories discussed below in section V.F of this rulemaking, the Ohio SIP will meet the SIP requirements for the Columbus area applicable for purposes of redesignation under part D of the CAA.

Subpart 1 of part D, found in sections 172-176 of the CAA, sets forth the basic nonattainment requirements applicable to all pollutant nonattainment areas.

Subpart 1 Section 172 Requirements

For purposes of evaluating this redesignation request, the applicable section 172 SIP requirements for the Columbus area are contained in sections 172(c)(1)-(9) of the CAA. A thorough discussion of these requirements can be found in the General Preamble for Implementation of Title I (57 FR 13498, April 16, 1992).

Section 172(c)(1) requires the plans for all nonattainment areas to provide for implementation of all Reasonably Available Control Measures (RACM) as expeditiously as practicable and to provide for attainment of the primary (human health-based) NAAQS. EPA interprets this requirement to impose a duty on all nonattainment areas to consider all available control measures and to adopt and implement such measures as are reasonably available for implementation in each area as components of the area's attainment demonstration. Because attainment has been

achieved in the Columbus area, no additional measures are needed to provide for attainment, and the section 172(c)(1) requirements are no longer considered to be applicable as long as the area continues to attain the standard (becoming permanently not applicable upon final redesignation of the area to attainment of the 1997 annual PM2.5 standard, when the area's maintenance plan will dictate the need for additional emission control measures) (40 CFR 51.1004(c)).

The Reasonable Further Progress (RFP) requirement under CAA section 172(c)(2) is defined as progress that must be made toward attainment. This requirement is not relevant for purposes of redesignation because the Columbus area has monitored attainment of the 1997 annual PM2.5 NAAQS. See "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Amendments of 1990," 57 FR 13498, April 16, 1992, (General Preamble) at 57 FR 13564. See also 40 CFR 51.918. In addition, because the Columbus area has attained the 1997 annual PM2.5 NAAQS and is no longer subject to an RFP requirement, the requirement to submit the section 172(c)(9) contingency measures is not applicable for purposes of redesignation. *Id.*

Section 172(c)(3) requires submission and approval of a comprehensive, accurate and current inventory of actual emissions. Ohio submitted a 2005 base year emissions inventory

for primary PM2.5, SO_2, and NOx emissions along with their redesignation request, and supplemented these emissions with a 2007 base year emissions inventory for VOC and ammonia emissions on April 30, 2013. As discussed below, in section V.F of this proposed rule, EPA is proposing to approve the 2005 and 2007 base year emissions inventories as meeting the section 172(c)(3) emission inventory requirement for the Columbus area.

Section 172(c)(4) requires the identification and quantification of allowable emissions for major new and modified stationary sources in an area, and section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources in the nonattainment area. EPA approved Ohio's current NSR program on January 10, 2003 (68 FR 1366). Nonetheless, since PSD requirements will apply after redesignation, the area need not have a fully-approved NSR program for purposes of redesignation, provided that the area demonstrates maintenance of the NAAQS without part D NSR. A detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, titled, "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment" (Nichols memorandum). Ohio has demonstrated that the Columbus area will be able to maintain the 1997 annual PM2.5 standard without part D NSR in effect in the Columbus area.

Therefore, the state need not have a fully approved part D NSR program as a condition for the approval of the state's redesignation request. The state's PSD program will become effective in the Columbus area upon redesignation of this area to attainment. See rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and, Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

Section 172(c)(6) requires the SIP to contain emission control measures necessary to provide for attainment of the standard. Because attainment has been reached, no additional measures are needed to provide for attainment.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, we believe that Ohio's SIP meets the requirements of section 110(a)(2) applicable for purposes of redesignation.

Subpart 1 Section 176(c)(4)(D) Conformity SIP Requirements

The requirement to determine conformity applies to transportation plans, programs and projects developed, funded or approved under title 23 of the U.S. Code and the Federal Transit Act (transportation conformity), as well as to all other federally-supported or funded projects (general conformity).

Section 176(c) of the CAA was amended by provisions contained in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law on August 10, 2005 (Public Law 109-59). Among the changes Congress made to this section of the CAA were streamlined requirements for state transportation conformity SIPs. State transportation conformity regulations must be consistent with Federal conformity regulations and address three specific requirements related to consultation, enforcement and enforceability. EPA believes that it is reasonable to interpret the transportation conformity SIP requirements as not applying for purposes of evaluating a redesignation request under section 107(d) for two reasons.

First, the requirement to submit SIP revisions to comply with the transportation conformity provisions of the CAA continues to apply to areas after redesignation to attainment since such areas would be subject to section 175A maintenance plans. Second, EPA's Federal conformity rules require the performance of conformity analyses in the absence of Federally-approved state rules. Therefore, because areas are subject to the transportation conformity requirements regardless of whether they are redesignated to attainment and, because they must implement conformity under Federal rules if state rules are not yet approved, EPA believes it is reasonable to view these

requirements as not applying for purposes of evaluating a redesignation request. See *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001), upholding this interpretation. See also 60 FR 62748, 62749-62750 (December 7, 1995) (Tampa, Florida).

Ohio has an approved transportation conformity SIP (72 FR 20945).

2. The Columbus Area Has a Fully Approved Applicable SIP Under Section 110(k) of the CAA

Upon final approval of Ohio's comprehensive 2005 and 2007 emissions inventories, EPA will have fully approved the Ohio SIP for the Columbus area under section 110(k) of the CAA for all requirements applicable for purposes of redesignation to attainment for the 1997 annual PM2.5 NAAQS. EPA may rely on prior SIP approvals in approving a redesignation request (See page 3 of the September 4, 1992, John Calcagni memorandum, "Procedures for Processing Requests to Redesignate Areas to Attainment" (Calcagni memorandum); *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984, 989-990 (6th Cir. 1998); *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001)), plus any additional measures it may approve in conjunction with a redesignation action. See 68 FR 25413, 25426 (May 12, 2003). Since the passage of the CAA in 1970, Ohio has adopted and submitted, and EPA has fully approved, provisions addressing various required SIP elements under the particulate matter

standards. In this action, EPA is proposing to approve Ohio's 2005 and 2007 base year emissions inventories for the Columbus area as meeting the requirement of section 172(c)(3) of the CAA for the 1997 annual PM2.5 standard.

3. Nonattainment Requirements

Under section 172, states with nonattainment areas must submit plans providing for timely attainment and meeting a variety of other requirements. In 2008, Ohio submitted an attainment demonstration for PM2.5 for the Columbus area. However, pursuant to 40 CFR 51.1004(c), EPA's determination that the Columbus area has attained the 1997 annual PM2.5 standard suspends the requirement for the state to submit, and for the EPA to rule on, certain SIP planning elements related to attainment planning requirements of the CAA, including attainment demonstration requirements, the Reasonably Available Control Technology (RACT)-RACM requirements of section 172(c)(1) of the CAA, the RFP and attainment requirements of sections 172(c)(2) and (6) and 182(b)(1) of the CAA, and the contingency measure requirements of section 172(c)(9) of the CAA.

As a result, the only remaining requirement under section 172 to be considered is the emissions inventory requirement under section 172(c)(3) of the CAA. As discussed in section V.F of this proposed rule, EPA is proposing to approve the 2005 and 2007 emissions inventories that Ohio submitted along with its

redesignation request and maintenance plan for the Columbus area and in its April 30, 2013, supplement as satisfying this emissions inventory requirement.

No Ohio SIP provision applicable for redesignation of the Columbus area for the 1997 PM2.5 standard is currently disapproved, conditionally approved or partially approved. If EPA approves Ohio's Columbus area 2005 and 2007 PM2.5-based emissions inventories as proposed, Ohio will have a fully approved SIP for all requirements applicable for purposes of redesignation.

4. Effect of the January 4, 2013, D.C. Circuit Decision Regarding PM2.5 Implementation Under Subpart 4 of the CAA

a. Background

As discussed above, on January 4, 2013, in *Natural Resources Defense Council* v. *EPA*, the D.C. Circuit remanded to EPA the "Final Clean Air Fine Particle Implementation Rule" (72 FR 20586, April 25, 2007) and the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers ($PM_{2.5}$)" final rule (73 FR 28321, May 16, 2008) (collectively, "1997 PM2.5 Implementation Rule"). 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred in implementing the 1997 PM2.5 NAAQS pursuant to the general implementation provisions of subpart 1 of part D of title I of

the CAA, rather than to the particulate matter-specific provisions of subpart 4 of part D of title I.

b. Proposal on This Issue

In this portion of the proposed redesignation, EPA addresses the effect of the Court's January 4, 2013, ruling on the proposed redesignation. As explained below, EPA is proposing to determine that the Court's January 4, 2013, decision does not prevent EPA from redesignating the Columbus area to attainment. Even in light of the Court's decision, redesignation for this area is appropriate under the CAA and EPA's longstanding interpretations of the CAA's provisions regarding redesignation. EPA first explains its longstanding interpretation that requirements that are imposed, or that become due, after a complete redesignation request is submitted for an area that is attaining the standard, are not applicable for purposes of evaluating a redesignation request. Second, EPA then shows that, even if EPA applies the subpart 4 requirements to Ohio's redesignation request and disregards the provisions of its 1997 PM2.5 implementation rule recently remanded by the Court, the state's request for redesignation of this area still qualifies for approval. EPA's discussion takes into account the effect of the Court's ruling on the Columbus area's maintenance plan, which EPA views as approvable when subpart 4 requirements are considered.

i. Applicable Requirements for Purposes of Evaluating the Redesignation Request

With respect to the 1997 PM2.5 Implementation Rule, the Court's January 4, 2013, ruling rejected EPA's reasons for implementing the PM2.5 NAAQS solely in accordance with the provisions of subpart 1, and remanded that matter to EPA, so that it could address implementation of the 1997 PM2.5 NAAQS under subpart 4 of part D of the CAA, in addition to subpart 1. For the purposes of evaluating Ohio's redesignation request for the Columbus area, to the extent that implementation under subpart 4 would impose additional requirements for areas designated nonattainment, EPA believes that those requirements are not "applicable" for the purposes of CAA section 107(d)(3)(E), and, thus, EPA is not required to consider subpart 4 requirements with respect to the Columbus area redesignation. Under its longstanding interpretation of the CAA, EPA has interpreted section 107(d)(3)(E) to mean, as a threshold matter, that the part D provisions which are "applicable" and which must be approved in order for EPA to redesignate an area include only those which came due prior to a state's submittal of a complete redesignation request. See the Calcagni memorandum. See also "State Implementation Plan (SIP) Requirements for Areas Submitting Requests for Redesignation to Attainment of the Ozone and Carbon Monoxide (CO) National Ambient Air Quality Standards

(NAAQS) on or after November 15, 1992," Memorandum from Michael Shapiro, Acting Assistant Administrator, Air and Radiation, September 17, 1993 (Shapiro memorandum); Final Redesignation of Detroit-Ann Arbor, (60 FR 12459, 12465-66, March 7, 1995); Final Redesignation of St. Louis, Missouri, (68 FR 25418, 25424-27, May 12, 2003); *Sierra Club v. EPA*, 375 F.3d 537, 541 (7th Cir. 2004) (upholding EPA's redesignation rulemaking applying this interpretation and expressly rejecting Sierra Club's view that the meaning of "applicable" under the statute is "whatever should have been in the plan at the time of attainment rather than whatever actually was in the plan and already implemented or due at the time of attainment").[2] In this case, at the time that Ohio submitted its redesignation request, requirements under subpart 4 were not due, and indeed, were not yet known to apply.

EPA's view that, for purposes of evaluating the Columbus area redesignation, the subpart 4 requirements were not due at the time the state submitted the redesignation request is in keeping with the EPA's interpretation of subpart 2 requirements for subpart 1 ozone nonattainment areas redesignated subsequent to the D.C. Circuit's decision in *South Coast Air Quality Mgmt.*

[2] Applicable requirements of the CAA that come due subsequent to the area's submittal of a complete redesignation request remain applicable until a redesignation is approved, but are not required as a prerequisite to redesignation. Section 175A(c) of the CAA.

Dist. v. EPA, 472 F.3d 882 (D.C. Cir. 2006). In *South Coast*, the Court found that EPA was not permitted to implement the 1997 8-hour ozone standard solely under subpart 1, and held that EPA was required under the statute to implement the standard under the ozone-specific requirements of subpart 2 as well. Subsequent to the *South Coast* decision, in evaluating and acting upon redesignation requests for the 1997 8-hour ozone standard that were submitted to EPA for areas under subpart 1, EPA applied its longstanding interpretation of the CAA that "applicable requirements," for purposes of evaluating a redesignation, are those that had been due at the time the redesignation request was submitted. See, e.g., Proposed Redesignation of Manitowoc County and Door County Nonattainment Areas (75 FR 22047, 22050, April 27, 2010). In those actions, EPA, therefore, did not consider subpart 2 requirements to be "applicable" for the purposes of evaluating whether the area should be redesignated under section 107(d)(3)(E).

EPA's interpretation derives from CAA section 107(d)(3). Section 107(d)(3)(E)(v) states that, for an area to be redesignated, a state must meet "all requirements 'applicable' to the area under section 110 and part D." Section 107(d)(3)(E)(ii) provides that the EPA must have fully approved the "applicable" SIP for the area seeking redesignation. These two sections read together support EPA's interpretation of

"applicable" as only those requirements that came due prior to submission of a complete redesignation request. First, holding states to an ongoing obligation to adopt new CAA requirements that arise after the states submit their redesignation requests, in order to be redesignated, would make it problematic or impossible for EPA to act on redesignation requests in accordance with the 18 month deadline Congress set for EPA action in section 107(d)(3)(D). If "applicable requirements" were interpreted to be a continuing flow of requirements with no reasonable limitation, states, after submitting redesignation requests, would be forced continuously to make additional SIP submissions that in turn would require EPA to undertake further notice-and-comment rulemaking actions to act on those submissions. This would create a regime of unceasing rulemaking that would delay action on the redesignation requests beyond the 18 month timeframe provided by the CAA for this purpose.

Second, a fundamental premise for redesignating a nonattainment area to attainment is that the area has attained the relevant NAAQS due to emission reductions from existing controls. Thus, an area, for which a redesignation request has been submitted, would have already attained the NAAQS as a result of satisfying statutory requirements that came due prior to the submission of the request. Absent a showing that unadopted and unimplemented requirements are necessary for

future maintenance, it is reasonable to view the requirements applicable for purposes of evaluating the redesignation request as including only those SIP requirements that have already come due. These are the requirements that led to attainment of the NAAQS. To require, for redesignation approval, that a state also satisfy additional SIP requirements coming due after the state submits its complete redesignation request, and while EPA is reviewing it, would compel the state to do more than is necessary to attain the NAAQS, without a showing that the additional requirements are necessary for maintenance.

In the context of this redesignation, the timing and nature of the Court's January 4, 2013, decision in *NRDC v. EPA* compound the consequences of imposing requirements that come due after the redesignation request is submitted. The state of Ohio submitted its redesignation request on June 3, 2011, but the Court did not issue its decision remanding EPA's 1997 PM2.5 Implementation Rule concerning the applicability of the provisions of subpart 4 until January 2013.

To require the state's fully-completed and pending redesignation request to comply now with requirements of subpart 4 that the Court announced only in January 2013, would be to give retroactive effect to such requirements when the state had no notice that it was required to meet them. The D.C. Circuit recognized the inequity of this type of retroactive impact in

Sierra Club v. Whitman, 285 F.3d 63 (D.C. Cir. 2002),[3] where it upheld the District Court's ruling refusing to make retroactive EPA's determination that the St. Louis area did not meet its attainment deadline. In that case, petitioners urged the Court to make EPA's nonattainment determination effective as of the date that the statute required, rather than the later date on which EPA actually made the determination. The Court rejected this view, stating that applying it "would likely impose large costs on States, which would face fines and suits for not implementing air pollution prevention plans . . . even though they were not on notice at the time." *Id.* at 68. Similarly, it would be unreasonable to penalize the state of Ohio by rejecting its redesignation request for an area that is already attaining the 1997 PM2.5 standard and that met all applicable requirements known to be in effect at the time of the redesignation request. For EPA now to reject the redesignation request solely because the state did not expressly address subpart 4 requirements, of which it had no notice, would inflict the same unfairness condemned by the Court in *Sierra Club v. Whitman*.

ii. Subpart 4 Requirements and Ohio's Redesignation Request

[3] *Sierra Club v. Whitman* was discussed and distinguished in a recent D.C. Circuit decision that addressed retroactivity in a quite different context, where, unlike the situation here, EPA sought to give its regulations retroactive effect. *National Petrochemical and Refiners Ass'n v. EPA*, 630 F.3d 145, 163 (D.C. Cir. 2010), rehearing denied, 643 F.3d 958 (D.C. Cir. 2011), cert denied, 132 S. Ct. 571 (2011).

Even if EPA were to take the view that the Court's January 4, 2013, decision requires that, in the context of pending redesignations, subpart 4 requirements were due and in effect at the time the state submitted its redesignation request, EPA proposes to determine that the Columbus area still qualifies for redesignation to attainment. As explained below, EPA believes that the redesignation request for the Columbus area, though not expressed in terms of subpart 4 requirements, substantively meets the requirements of that subpart for purposes of redesignating the area to attainment.

With respect to evaluating the relevant substantive requirements of subpart 4 for purposes of redesignating the Columbus area, EPA notes that subpart 4 incorporates components of subpart 1 of part D, which contains general air quality planning requirements for areas designated as nonattainment. See Section 172(c). Subpart 4 itself contains specific planning and scheduling requirements for PM10[4] nonattainment areas, and, under the Court's January 4, 2013, decision in *NRDC v. EPA*, these same statutory requirements also apply to PM2.5 nonattainment areas. EPA has longstanding general guidance that interprets the 1990 amendments to the CAA, and which makes recommendations to states for meeting the statutory requirements for SIPs addressing nonattainment areas. See General Preamble.

[4] PM10 refers to particulates nominally 10 micrometers in diameter or smaller.

In the General Preamble, EPA discussed the relationship of subpart 1 and subpart 4 SIP requirements, and pointed out that subpart 1 requirements were to an extent "subsumed by, or integrally related to, the more specific PM-10 requirements." 57 FR 13538 (April 16, 1992). The subpart 1 requirements include, among other things, provisions for attainment demonstrations, RACM, RFP, emissions inventories, and contingency measures.

For the purposes of this redesignation, in order to identify additional requirements which would apply under subpart 4, we are considering the Columbus area to be a "moderate" PM2.5 nonattainment area. Under section 188 of the CAA, all areas designated nonattainment areas under subpart 4 would initially be classified by operation of law as "moderate" nonattainment areas, and would remain moderate nonattainment areas unless and until EPA reclassifies the areas as "serious" nonattainment areas. Accordingly, EPA believes that it is appropriate to limit the evaluation of the potential impacts of subpart 4 requirements to those that would be applicable to moderate nonattainment areas. Sections 189(a) and (c) of subpart 4 apply to moderate nonattainment areas and include the following: (1) an approved permit program for construction of new and modified major stationary sources (section 189(a)(1)(A)); (2) an attainment demonstration (section 189(a)(1)(B)); (3) provisions

for RACM (section 189(a)(1)(C)); and (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date (section 189(c)).

The permit requirements of subpart 4, as contained in section 189(a)(1)(A), refer to and apply the subpart 1 permit provisions requirements of sections 172 and 173 to PM10, without adding to them. Consequently, EPA believes that section 189(a)(1)(A) does not itself impose for redesignation purposes any additional requirements for moderate areas beyond those contained in subpart 1.[5] In any event, in the context of redesignation, EPA has long relied on the interpretation that a fully approved nonattainment NSR program is not considered an applicable requirement for redesignation, provided that the area can maintain the standard with a PSD program after redesignation. A detailed rationale for this view is described in the Nichols memorandum. See also rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

[5] The potential effect of section 189(e) on section 189(a)(1)(A) for purposes of evaluating this redesignation request is discussed below.

With respect to the specific attainment planning requirements under subpart 4,[6] when EPA evaluates a redesignation request under either subpart 1 and/or 4, any area that is attaining the PM2.5 standard is viewed as having satisfied the attainment planning requirements for these subparts. For redesignations, EPA has, for many years, interpreted attainment-linked requirements as not applicable for areas attaining the standard. In the General Preamble, EPA stated that:

> The requirements for RFP will not apply in evaluating a request for redesignation to attainment since, at a minimum, the air quality data for the area must show that the area has already attained. Showing that the State will make RFP towards attainment will, therefore, have no meaning at that point.

General Preamble, 57 FR 13498, 13564. The General Preamble also explained that:

> [t]he section 172(c)(9) requirements are directed at ensuring RFP and attainment by the applicable date. These requirements no longer apply when an area has attained the standard and is eligible for redesignation. Furthermore, section 175A for maintenance plans . . . provides specific requirements

[6] I.e., attainment demonstration, RFP, RACM, milestone requirements, and contingency measures.

for contingency measures that effectively supersede the requirements of section 172(c)(9) for these areas. *Id.*

EPA similarly stated in its 1992 Calcagni memorandum that, "The requirements for reasonable further progress and other measures needed for attainment will not apply for redesignations because they only have meaning for areas not attaining the standard."

It is evident that, even if we were to consider the Court's January 4, 2013, decision in *NRDC v. EPA* to mean that attainment-related requirements specific to subpart 4 should be imposed retroactively[7] and, thus, are now past due, those requirements do not apply to an area that is attaining the 1997 PM2.5 standard, for the purpose of evaluating a pending request to redesignate the area to attainment. EPA has consistently enunciated this interpretation of applicable requirements under section 107(d)(3)(E) since the General Preamble was published more than twenty years ago. Courts have recognized the scope of EPA's authority to interpret "applicable requirements" in the redesignation context. *See Sierra Club* v. *EPA,* 375 F.3d 537 (7th Cir. 2004).

[7] As EPA has explained above, we do not believe that the Court's January 4, 2013, decision should be interpreted so as to impose these requirements on the states retroactively. *Sierra Club v. Whitman*, *supra.*

Moreover, even outside the context of redesignations, EPA has viewed the obligations to submit attainment-related SIP planning requirements of subpart 4 as inapplicable for areas that EPA determines are attaining the standard. EPA's prior "Clean Data Policy" rulemakings for the PM10 NAAQS, also governed by the requirements of subpart 4, explain EPA's reasoning. They describe the effects of a determination of attainment on the attainment-related SIP planning requirements of subpart 4. See "Determination of Attainment for Coso Junction Nonattainment Area," (75 FR 27944, May 19, 2010). See also Coso Junction proposed PM10 redesignation, (75 FR 36023, 36027, June 24, 2010); Proposed and Final Determinations of Attainment for San Joaquin Nonattainment Area (71 FR 40952, 40954–55, July 19, 2006; and 71 FR 63641, 63643–47 October 30, 2006). In short, EPA in this context, has also long concluded that to require states to meet superfluous SIP planning requirements is not necessary and not required by the CAA, so long as those areas continue to attain the relevant NAAQS.

Elsewhere in this notice, EPA proposes to determine that the area has attained the 1997 PM2.5 standard. Under its longstanding interpretation, EPA is proposing to determine here that the area meets the attainment-related plan requirements of subparts 1 and 4.

Thus, EPA is proposing to conclude that the requirements to submit an attainment demonstration under 189(a)(1)(B), a RACM determination under section 172(c)(1) and section 189(a)(1)(c), a RFP demonstration under 189(c)(1), and contingency measure requirements under section 172(c)(9) are satisfied for purposes of evaluating the redesignation request.

iii. Subpart 4 and Control of PM2.5 Precursors

The D.C. Circuit, in *NRDC v. EPA,* remanded to EPA the two rules at issue in the case with instructions to EPA to re-promulgate them consistent with the requirements of subpart 4. EPA, in this section, addresses the Court's opinion with respect to PM2.5 precursors. While past implementation of subpart 4 for PM10 has allowed for control of PM10 precursors, such as NOx from major stationary, mobile, and area sources, in order to attain the standard as expeditiously as practicable, CAA section 189(e) specifically provides that control requirements for major stationary sources of direct PM10 shall also apply to PM10 precursors from those sources, except where EPA determines that major stationary sources of such precursors "do not contribute significantly to PM_{10} levels which exceed the standard in the area."

EPA's 1997 PM2.5 implementation rule, remanded by the D.C. Circuit, contained rebuttable presumptions concerning certain PM2.5 precursors applicable to attainment plans and control

measures related to those plans. Specifically, in 40 CFR 51.1002, EPA provided, among other things, that a state was "not required to address VOC [and ammonia] as . . . $PM_{2.5}$ attainment plan precursor[s] and to evaluate sources of VOC [and ammonia] emissions in the State for control measures." EPA intended these to be rebuttable presumptions. EPA established these presumptions at the time because of uncertainties regarding the emission inventories for these pollutants and the effectiveness of specific control measures in various regions of the country in reducing PM2.5 concentrations. EPA also left open the possibility for such regulation of VOC and ammonia in specific areas where that was necessary.

The Court, in its January 4, 2013, decision, made reference to both section 189(e) and 40 CFR 51. 1002, and stated that, "In light of our disposition, we need not address the petitioners' challenge to the presumptions in [40 CFR 51.1002] that volatile organic compounds and ammonia are not $PM_{2.5}$ precursors, as subpart 4 expressly governs precursor presumptions." *NRDC v. EPA*, at 27, n.10.

Elsewhere in the Court's opinion, however, the Court observed:

> Ammonia is a precursor to fine particulate matter, making it a precursor to both $PM_{2.5}$ and PM_{10}. For a PM_{10} nonattainment area governed by subpart 4, a precursor

> is presumptively regulated. See 42 U.S.C. § 7513a(e) [section 189(e)].

Id. at 21, n.7. For a number of reasons, EPA believes that its proposed redesignation of the Columbus area is consistent with the Court's decision with respect to subpart 4. First, while the Court, citing section 189(e), stated that "for a PM_{10} area governed by subpart 4, a precursor is 'presumptively regulated,'" the Court expressly declined to decide the specific challenge to EPA's 1997 PM2.5 implementation rule provisions regarding ammonia and VOC as precursors. The Court had no occasion to reach whether and how it was substantively necessary to regulate any specific precursor in a particular PM2.5 nonattainment area, and did not address what might be necessary for purposes of acting upon a redesignation request.

However, even if EPA takes the view that the requirements of subpart 4 were deemed applicable at the time the state submitted the redesignation request, and disregards the implementation rule's rebuttable presumptions regarding ammonia and VOC as PM2.5 precursors, the regulatory consequence would be to consider the need for regulation of all precursors from any sources in the area to demonstrate attainment and to apply the section 189(e) provisions to major stationary sources of

precursors. In the case of the Columbus area, EPA believes that doing so is consistent with proposing redesignation of the area for the 1997 PM2.5 standard. The Columbus area has attained the 1997 PM2.5 standard without any specific additional controls of VOC and ammonia emissions from any sources in the area.

Precursors in subpart 4 are specifically regulated under the provisions of section 189(e), which requires, with important exceptions, control requirements for major stationary sources of PM10 precursors.[8] Under subpart 1 and EPA's prior implementation rule, all major stationary sources of PM2.5 precursors were subject to regulation, with the exception of ammonia and VOC. Thus, we must address here whether additional controls of ammonia and VOC from major stationary sources are required under section 189(e) of subpart 4 in order to redesignate the area for the 1997 PM2.5 standard. As explained below, we do not believe that any additional controls of ammonia and VOC are required in the context of this redesignation.

In the General Preamble, EPA discusses its approach to implementing section 189(e). See 57 FR 13538-13542. With regard to precursor regulation under section 189(e), the General Preamble explicitly stated that control of VOC under other CAA

[8] Under either subpart 1 or subpart 4, for purposes of demonstrating attainment as expeditiously as practicable, a state is required to evaluate all economically and technologically feasible control measures for direct PM emissions and precursor emissions, and to adopt those measures that are deemed reasonably available.

requirements may suffice to relieve a state from the need to adopt precursor controls under section 189(e). See 57 FR 13542. EPA, in this proposal, proposes to determine that the SIP has met the provisions of section 189(e) with respect to ammonia and VOC as precursors. This proposed determination is based on our findings that: (1) the Columbus area contains no major stationary sources of ammonia, and (2) existing major stationary sources of VOC are adequately controlled under other provisions of the CAA regulating the ozone NAAQS.[9] In the alternative, EPA proposes to determine that, under the express exception provisions of section 189(e), and in the context of the redesignation of the area, which is attaining the 1997 annual PM2.5 standard, at present ammonia and VOC precursors from major stationary sources do not contribute significantly to levels exceeding the 1997 annual PM2.5 standard in this area. See 57 FR 13539-13542.

EPA notes that its 1997 PM2.5 Implementation Rule provisions in 40 CFR 51.1002 were not directed at evaluation of PM2.5 precursors in the context of redesignation, but at SIP plans and control measures required to bring a nonattainment area into attainment of the 1997 PM2.5 NAAQS. By contrast, redesignation to attainment primarily requires the area to have

[9] The Columbus area has reduced VOC emissions through the implementation of various control programs including VOC RACT regulations and various on-road and non-road motor vehicle control programs.

already attained due to permanent and enforceable emission reductions, and to demonstrate that controls in place can continue to maintain the standard. Thus, even if we regard the Court's January 4, 2013, decision as calling for "presumptive regulation" of ammonia and VOC for the control of PM2.5 under the attainment planning provisions of subpart 4, those provisions do not require additional control of these precursors for an area that already qualifies for redesignation. Nor does EPA believe that requiring Ohio to address precursors differently than they have already done would result in a substantively different outcome.

Although, as EPA has emphasized, its consideration here of precursor requirements under subpart 4 is in the context of a redesignation to attainment, EPA's existing interpretation of subpart 4 requirements with respect to precursors in attainment plans for PM10 contemplates that states may develop attainment plans that regulate only those precursors that are necessary for purposes of attainment in the area in question, i.e., states may determine that only certain precursors need to be regulated for

attainment and control purposes.[10] Courts have upheld this approach to the requirements of subpart 4 for PM10.[11] EPA believes that application of this approach to PM2.5 precursors under subpart 4 is reasonable. Because the Columbus area has already attained the 1997 PM2.5 NAAQS with its current approach to regulation of PM2.5 precursors, EPA believes that it is reasonable to conclude in the context of this redesignation that there is no need to revisit the attainment control strategy with respect to the treatment of precursors. Even if the Court's decision is construed to impose an obligation, in evaluating this redesignation request, to consider additional precursors under subpart 4, it would not affect EPA's approval here of Ohio's request for redesignation of the Columbus area. In the context of a redesignation, the state has shown that the Columbus area has attained the standard. Moreover, the state has shown and EPA has proposed to determine that attainment in this area is due to permanent and enforceable emissions reductions on all precursors necessary to provide for continued

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[10] *See*, *e.g.*, "Approval and Promulgation of Implementation Plans for California – San Joaquin Valley PM-10 Nonattainment Area; Serious Area Plan for Nonattainment of the 24-Hour and Annual PM-10 Standards," 69 FR 30006 (May 26, 2004) (approving a PM10 attainment plan that imposed controls on direct PM10 and NO_X emissions and that did not impose controls on SO_2, VOC, or ammonia emissions).

[11] *See*, *e.g.*, *Assoc. of Irritated Residents v. EPA*, 423 F.3d 989 (9th Cir. 2005).

attainment. Therefore, no further control of additional precursors is necessary. Accordingly, EPA does not view the January 4, 2013, decision of the Court as precluding redesignation of the Columbus area to attainment for the 1997 PM2.5 NAAQS at this time.

In sum, even if Ohio were required to address precursors for the Columbus area under subpart 4 rather than under subpart 1, as interpreted in EPA's remanded 1997 PM2.5 Implementation Rule, EPA would still conclude that the area had met all applicable requirements for purposes of redesignation in accordance with section 107(d)(3)(E)(ii) and (v).

C. Are the PM2.5 Air Quality Improvements in the Columbus Area Due to Permanent and Enforceable Emission Reductions?

For purposes of redesignation, section 107(d)(3)(E)(iii) of the CAA requires the state to demonstrate that the improvement in air quality is due to permanent and enforceable emission reductions resulting from the implementation of the SIP, applicable Federal air pollution control regulations, and other permanent and enforceable emission reductions. EPA finds that Ohio has demonstrated that the observed PM2.5 air quality improvement in the Columbus area is due to permanent and enforceable emission reductions. In making this demonstration, Ohio has determined the change in primary PM2.5, NOx, and SO_2 emissions between 2005, one of the years in which the Columbus

area violated the 1997 annual PM2.5 standard, and 2008, one of the years in which the Columbus area attained the 1997 annual PM2.5 standard. The reduction in emissions and the corresponding improvement in air quality over this time period can be attributed to a number of regulatory control measures that have been implemented in the Columbus area and in surrounding contributing areas.

1. Permanent and Enforceable Emission Controls

The following is a discussion of permanent and enforceable emission control measures that have been implemented in the Columbus area and in upwind areas (resulting in lower pollutant transport into the Columbus area).

a. Federal Emission Control Measures

Reductions in PM2.5 precursor emissions have occurred statewide and in upwind areas as a result of the following Federal emission control measures. Most of these emission control measures will result in additional emission reductions in the future.

i. Tier 2 Emission Standards for Vehicles and Gasoline Sulfur Standards

These emission control requirements result in lower VOC, NOx, and SO_2 emissions from new cars and light-duty trucks, including sport utility vehicles. The Federal rules were phased in between 2004 and 2009. The EPA has estimated that, by the

time post-2009 vehicles have entirely replaced pre-2009 vehicles, the following vehicle NOx emission reductions will occur nationwide: passenger cars (light-duty vehicles, 77 percent; light-duty trucks, minivans, and sport utility vehicles, 86 percent; and, larger sport utility vehicles, vans, and heavier trucks, 65 to 95 percent. VOC emission reductions will be approximately 12 percent for passenger cars, 18 percent for smaller sports utility vehicles, light trucks, and minivans, and 15 percent for larger sports utility vans, and heavier trucks. Some of the emission reductions resulting from new vehicle standards occurred during the 2005-2008 period. Additional emission reductions occurred subsequent to 2008, and will continue to occur as the result of this emission control throughout the maintenance period as new vehicles replace older vehicles. The Tier 2 standards also reduced the sulfur content of gasoline to 30 parts per million (ppm) beginning in January 2006. The sulfur content of gasoline is estimated to be reduced by up to 90 percent by the end of the implementation of this emission control program.

ii. Heavy-Duty Diesel Engine Rule

This rule, which EPA issued in July 2000, limits the sulfur content of diesel fuel and went into effect in 2004. A second phase of implementation took effect in 2007 and resulted in reduced PM2.5 emissions from heavy-duty highway diesel engines

and further reduced the highway diesel fuel sulfur content to 15 ppm. The full implementation of this rule is estimated to achieve a 90 percent reduction in direct PM2.5 emissions (including direct emissions of sulfates) and a 95 percent reduction of NOx emissions for new engines using low sulfur diesel fuel. The reductions in fuel sulfur content occurred by during the 2007-2009 attainment period; however, additional emission reductions will continue to occur throughout the maintenance period as vehicles with older heavy-duty diesel engines are replaced by vehicles with newer diesel engines. This rule will also lower SO_2 emissions from engines using the low sulfur diesel fuel, resulting in lower PM2.5 sulfate concentrations; however, EPA has not estimated the level of this emission reduction and the level of its impact on PM2.5 concentrations.

iii. Non-Road Diesel Engine Standards

In May 2004, EPA promulgated a rule to establish emission standards for large non-road diesel engines, such as those used in construction, agriculture, or mining operations, and to regulate the sulfur content in non-road diesel fuel. The engine emission standards in this rule were to be phased in between 2008 and 2014. This rule reduced the allowable sulfur content in non-road diesel fuel by over 99 percent. Prior to 2006, non-road diesel fuel averaged approximately 3,400 ppm in sulfur

content. This rule limits non-road diesel fuel sulfur content to 500 ppm by 2010. The combined engine standards and fuel sulfur content limits reduced NOx and PM2.5 emissions (including direct emissions of sulfates) from large non-road diesel engines by over 90 percent compared to pre-control non-road engines using the higher sulfur content diesel fuel. This rule achieved all of the reductions in fuel sulfur content by 2010. Some emission reductions from the new engine emission standards were realized over the 2007-2009 attainment period, although most of the engine emission reductions will occur during the maintenance period as the non-road diesel engines are replaced with newer engines.

iv. Non-Road Spark-Ignition Engines and Recreational Engine Standards

Although Ohio did not document this Federal emission control measure in its May 2011 "Redesignation Request and Maintenance Plan for the Columbus $PM_{2.5}$ Nonattainment Area" nor in the supplemental emissions submittal, Ohio could have also taken credit for this permanent and enforceable Federal emission control requirement.

In November 2002, EPA promulgated emission standards for groups of previously unregulated non-road engines. These engines include large spark-ignition engines, such as those used in forklifts and airport ground-service equipment; recreational

vehicles using spark-ignition engines, such as off-highway motorcycles, all-terrain vehicles, and snowmobiles; and, recreational marine diesel engines. Emission standards from large spark-ignition engines were implemented in two tiers, with Tier 1 starting in 2004 and Tier 2 starting in 2007. Recreational vehicle emission standards were phased in from 2006 through 2012. Marine diesel engine standards were phased in from 2006 through 2009.

With full implementation of all of the non-road spark-ignition engine and recreational engine standards, an overall 72 percent reduction in VOC, 80 percent reduction in NOx and 56 percent reduction carbon monoxide (CO) emissions are expected by 2020. Some of these emission reductions had occurred by the 2008-2010 attainment period and additional emission reductions will occur during the maintenance period as the fleets turn over.

b. Control Measures in Upwind Areas

Given the significance of sulfates and nitrates in the Columbus area PM2.5 air quality, the area's PM2.5 air quality is strongly affected by regulation of SO_2 and NOx emissions from power plants in areas upwind of the Columbus area. The following discusses the emission control regulations impacting upwind area.

i. NOx SIP Call

On October 27, 1998 (63 FR 57356), EPA issued a NOx SIP call requiring the District of Columbia and 22 states to reduce emissions of NOx. Affected states were required to comply with Phase I of the NOx SIP call beginning in 2004, and with Phase II beginning in 2007. NOx emission reductions resulting from regulations developed in response to the NOx SIP call area permanent and enforceable. The state of Ohio and other nearby, upwind states, including Michigan, Indiana, Illinois, and Kentucky, were subject to the NOx SIP call.

ii. Clean Air Interstate Rule (CAIR) and CSAPR

EPA proposed CAIR on January 30, 2004, at 69 FR 4566, and promulgated CAIR on May 12, 2005, at 70 FR 25162, and promulgated associated Federal Implementation Plans (FIPs) on April 28, 2006, at 71 FR 25328, in order to reduce SO_2 and NOx emissions and improve air quality in areas across Eastern United states. However, on July 11, 2008, the D.C. Circuit vacated and remanded both CAIR and the associated CAIR FIPs in their entirety. See *North Carolina* v. *EPA*, 531 F.3d 836 (D.C. Cir. 2008). EPA petitioned for a rehearing, and the D.C. Circuit issued an order remanding CAIR and the CAIR FIPs to EPA without vacatur. See *North Carolina* v. *EPA*, 550 F.3d 1176 (D.C. Cir. 2008). The D.C. Circuit, thereby, left CAIR in place in order to "temporarily preserve the environmental values covered by CAIR" until EPA replaced it with a rule consistent with the

Court's opinion. *Id.* at 1178. The Court directed EPA to "remedy CAIR's flaws" consistent with the July 11, 2008, opinion, but declined to impose a schedule on EPA for completing this action. *Id.*

EPA recently promulgated CSAPR (76 FR 48208, August 8, 2011) to replace CAIR, which, as noted above, had been in place since 2005. See 76 FR 59517. CSAPR required significant reductions in emissions of SO_2 and NOx from electric generating units to limit the interstate transport of these pollutants and the ozone and fine particulate matter they form in the atmosphere. See 76 FR 70093.

On December 30, 2011, the D.C. Circuit issued an order addressing the status of CSAPR and CAIR in response to motions filed by numerous parties seeking a stay of CSAPR pending judicial review. In that order, the Court stayed CSAPR pending resolution of the petitions for review of that rule in *EME Homer City Generation* v. *EPA* (No. 11-1302 and consolidated cases). The Court also indicated that EPA was expected to continue to administer CAIR in the interim until judicial review of CSAPR as completed.

On August 21, 2012, the D.C. Circuit issued a decision to vacate CSAPR. In that decision, it also ordered EPA to continue administering CAIR "pending the promulgation of a valid replacement." *EME Homer City Generation,* 696 F.3d at 38. The

D.C. Circuit denied all petitions for rehearing on January 24, 2013. EPA and other parties have filed petitions for certiorari to the U.S. Supreme Court. As noted above, on June 24, 2013, the Supreme Court consolidated the petitions and granted certiorari (granted review as requested by these petitions). Nonetheless, EPA intends to continue to act in accordance with the *EME Homer City Generation* opinion.

In light of these unique circumstances and for the reasons explained below, to the extent that attainment is due to emission reductions associated with CAIR, EPA is proposing to determine that those emission reductions are sufficiently permanent and enforceable for purposes of CAA section 107(d)(3)(E)(iii) (and for purposes of assessing maintenance of the 1997 annual PM2.5 standard in the Columbus area, as discussed below, for CAA section 175A).

2. Emission Reductions

a. Ohio's Demonstration That Significant Emission Reductions Have Occurred in the Columbus Area and in Upwind Areas

To demonstrate that significant emission reductions have resulted in attainment, Ohio EPA compared the Columbus area NOx, SO_2, and primary PM2.5 emissions for 2005 with those of 2008. As noted above, the 2008 emissions represent those for a year in which the Columbus area was attaining the 1997 annual PM2.5 standard (2008 is the middle year of the 2007-2009 period in

which the Columbus area initially attained the 1997 annual PM2.5 standard), and 2005 represents a year in which the Columbus area was violating this standard.

The derivation of the 2005 (base year) emissions is discussed in more detail below in section V.F of this proposed rule. The derivation of the 2008 (attainment year) emissions is discussed in more detail here.

The 2008 emissions were based on actual source activity levels. The point source emissions were compiled from Ohio's annual emissions reports, submitted to the OEPA by individual source facilities for all non-Electric Generating Unit (non-EGU) sources, and EGU emissions projected from the 2005 EPA Air Market's acid rain database. Area source emissions were taken from the Ohio 2005 periodic inventory and were projected to 2008 using Department of Commerce Bureau of Economic Analysis (BEA) growth factors and some updated local information. Area source emissions were calculated using the most recently available emission calculation methodologies, and source activity data (population, employment by source sector, fuel use, etc.) specific to 2008. On-road mobile source emissions were calculated using EPA's MOVES2010 emissions model with 2008 Vehicle Miles Traveled (VMT) and other vehicle data (roadway speeds, vehicle type and age distribution, etc.) provided by the Mid-Ohio Regional Planning Commission (MORPC) and Ohio

Department of Transportation (ODOT). Non-road mobile source emissions were generated using EPA's National Mobile Inventory Model (NMIM) 2002 application and source activity data projected to 2008. Emissions for aircraft, commercial marine vessels, and railroads were derived separately by contractors under the direction of the Lake Michigan Air Directors Consortium (LADCO). Spatial surrogates were used to allocate emissions to individual counties. Biogenic emissions were not calculated since these emissions are assumed to remain constant over time (biogenic emissions are not included in the 2002, 2008, 2015, and 2022 emissions summarized in this proposed rule).

The 2005 and 2008 emissions for NOx, SO_2, and primary PM2.5 for the Columbus area are summarized in tables 2 through 4 below. All emissions are in units of tons per year (TPY). All summarized emissions are documented in Ohio's May 2011 "Redesignation Request and Maintenance Plan For the Columbus Annual $PM_{2.5}$ Nonattainment Area."

Table 2. Comparison of 2005 and 2008 NOx Emission Totals for the Columbus Area By Source Sector (TPY)

Source Sector	2005	2008	Net Change 2005-2008
Point Sources	25,188.87	24,373.96	-814.91
Area Sources	5,467.2	5,534.32	67.12
On-Road Mobile Sources	53,390.61	44,825.81	-8,564.80
Off-Road Mobile Sources	14,609.69	12,728.47	-1,881.22
Total	**98,656.37**	**87,462.56**	**-11,193.81**

Table 3. Comparison of 2005 and 2008 Primary PM2.5 Emission Totals for the Columbus Area by Source Sector (TPY)

Source Sector	2005	2008	Net Change 2005-2008
Point Sources	1,478.64	1,553.83	75.19
Area Sources	1,552.43	1,620.06	67.63
On-Road Mobile Sources	1,660.33	1,451.09	-209.24
Off-Road Mobile Sources	1,058.53	908.32	-150.21
Total	**5,749.93**	**5,533.3**	**-216.63**

Table 4. Comparison of 2005 and 2008 SO_2 Emission Totals for the Columbus Area by Source Sector (TPY)

Source Sector	2005	2008	Net Change 2005-2008
Point Sources	111,266.53	94,553.48	-16,713.05
Area Sources	566.95	563.68	-3.27
On-Road Mobile Sources	864.22	283.05	-581.17
Off-Road Mobile Sources	1,603.24	729.80	-873.44
Total	**114,300.88**	**96,130.01**	**-18,170.87**

Tables 2 through 4 show that NOx, SO_2, and primary PM2.5 emissions in the Columbus area have been reduced significantly between the 2005 violation year and the 2008 attainment year.

In addition to the local PM2.5 precursor emission reductions, we believe that regional NOx and SO_2 emission reductions resulting from the implementation of EPA's Acid Rain Program (ARP) (see 40 CFR parts 72 through 78), NOx SIP call, and CAIR have significantly contributed to the PM2.5 air quality improvement in the Columbus area. To assess the change in regional emissions from states believed to significantly contribute to annual PM2.5 concentrations in the Columbus area, OEPA has considered the change in EGU NOx and SO_2 emissions from

Ohio and surrounding states between 2008 and 2009. Table 5 shows the reduction in NOx and SO_2 emissions for EGUs in Ohio, the LADCO states (Illinois, Indiana, Michigan, Ohio, and Wisconsin), and nationwide (these data are taken from table 9, page 23 of OEPA's May 2011 redesignation and maintenance plan).

Table 5. Statewide EGU Emissions for 2008 and 2009 (TPY)

Area	NOx			SO_2		
	2008	2009	Percent Reduction	2008	2009	Percent Reduction
Ohio	235,018	96,351	59	709,444	601,101	15
LADCO States	702,384	393,930	44	2,019,036	1,620,071	20
Nationwide	2,996,385	1,990,385	34	7,616,262	5,747,353	25

As can be seen in table 5, the implementation of CAIR (the primary additional regional emissions control implemented during the 2008-2009 period) resulted in significant reductions in Ohio, regional, and nationwide NOx and SO_2 emissions from EGUs, all of which OEPA believes contributed to attainment of the 1997 annual PM2.5 standard in the Columbus area. Since CAIR remains in place until EPA can replace it with an acceptable new state region-wide emissions control rule, we believe these emission reductions to be permanent and enforceable.

The information summarized above shows that emissions of PM2.5 and its most significant precursors (SO_2 and NOx) have significantly decreased between 2005 and 2009 in the Columbus area and in states with EGU emissions significantly impacting the annual PM2.5 concentrations in the Columbus area.

b. VOC and Ammonia Emission Reductions

For several reasons we believe that VOC emission reductions in the Columbus area and in upwind states have also contributed to the observed improvement in annual PM2.5 concentrations in the Columbus area. In addition, for several reasons, we also believe that changes in ammonia emissions have not significantly impacted the observed annual PM2.5 concentrations in this area.

First, as noted elsewhere in this proposed rule in EPA's discussion of section 189(e) of the CAA, VOC emissions in the Columbus area have historically been well-controlled under SIP requirements related to ozone and other pollutants.[12] Second, total ammonia emissions throughout the Columbus area are very low, estimated to be 6,101.37 TPY in 2007. See the discussion of 2007 VOC and ammonia emissions below. This amount of ammonia emissions appears especially small in comparison to the total amounts of SO_2 and NOx emissions sources in the area in 2005. Third, as described below, available information shows that no PM2.5 precursor, including VOC and ammonia, is expected to increase over the maintenance period so as to interfere with or undermine the state's maintenance demonstration.

[12] For a thorough discussion of VOC emission controls and estimates (2002 and 2004) and projected (2009 and 2018) VOC emission levels (summertime emissions) in the Columbus area, see EPA's proposed rule for the redesignation of the Columbus area to attainment of the 1997 8-hour ozone standard (72 FR 32257, June 12, 2007). We observe here that the estimated/projected summertime VOC emission reductions in the Columbus area also generally reflect reductions in annual emissions of VOC in this area.

c. Conclusions Regarding Emission Reductions Between 2005 and 2008 in the Columbus Area

From the above, it is concluded that SO_2, NOx, primary PM2.5, and VOC emissions were well controlled between 2005 and 2008 and that significant reductions in the emissions of these pollutants occurred in the Columbus area during this period. During the same period, emissions of ammonia are believed to have had minimal impact on PM2.5 concentrations in the Columbus area. We believe that the emission reductions of the significant PM2.5 precursors, including primary PM2.5, in the Columbus area and in upwind states are responsible for the observed improvement in annual PM2.5 concentrations in the Columbus area. Based on this observation, we conclude that the attainment of the 1997 annual PM2.5 standard in the Columbus area can be explained on the basis of permanent and enforceable emission reductions within the Columbus area and in the states regulated by CAIR and NOx SIP call regulations.

D. Does Ohio Have a Fully Approvable PM2.5 Maintenance Plan Pursuant to Section 175A of the CAA for the Columbus Area?

In conjunction with Ohio's request to redesignate the Columbus area to attainment of the 1997 annual PM2.5 standard, OEPA submitted a SIP revision to provide for maintenance of the 1997 annual PM2.5 standard in the Columbus area through 2022. This maintenance plan demonstrates that emissions in the

Columbus area are projected to remain at or below the attainment levels throughout the maintenance period and provides for corrective action should the 1997 annual standard be violated or threatened in the Columbus area during the maintenance period. The following summarizes the details of the maintenance plan and maintenance demonstration.

1. What Is Required in a Maintenance Plan?

Sections 107(d)(3)(E)(iv) and 175A of the CAA require that states demonstrate that the areas to be redesignated will continue to meet the PM2.5 NAAQS for at least 10 years after EPA approves the redesignation of the areas to attainment of the NAAQS. Section 175A of the CAA sets forth the required elements of a maintenance plan. Under section 175A, a state must also commit to submit a revised maintenance plan within eight years after redesignation to provide for maintenance of the standard for an additional 10 years after the initial 10-year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures with a schedule for implementation as EPA deems necessary to assure prompt correction of any future violations of the standard.

The Calcagni memorandum provides additional guidance on the content of a maintenance plan. The memorandum states that a maintenance plan should address the following items: the attainment emission inventories; a maintenance demonstration

showing maintenance of the standard for the 10 years of the maintenance period; a commitment to maintain the existing monitoring network; documentation of the factors and procedures to be used for verification of continued attainment of the standard; and, a contingency plan to prevent or correct future violations of the standard.

2. Attainment Inventory

The OEPA developed NOx, SO_2, and primary PM2.5 emission inventories for 2008, one of the years used to demonstrate monitored attainment of the 1997 annual PM2.5 standard. These emission levels are defined to be the attainment levels of the emissions. The 2008 attainment levels of the emissions are summarized in tables 3 through 5 above and in tables 6 through 8 below.

3. Demonstration of Maintenance

a. State Demonstration of Maintenance

Along with the redesignation request, OEPA submitted a revision of the Ohio PM2.5 SIP to include a demonstration of maintenance for the Columbus area, as required by section 175A of the CAA. This demonstration shows maintenance of the 1997 annual PM2.5 standard through 2022 by showing that current and future emissions of NOx, SO_2, and primary PM2.5 for the Columbus area will remain at or below attainment year emission levels. A maintenance demonstration may be based on such an emissions

inventory approach. See *Wall* v. *EPA*, 265 F.3d 426 (6th Cir. 2001), *Sierra Club* v. *EPA*, 375 F.3d 537 (7th Cir. 2004). See also 66 FR 53094, 53099-53100 (October 19, 2001), 68 FR 25413, 25430-25432 (May 12, 2003).

OEPA used emission projections for 2015 and 2022 to demonstrate maintenance. For primary PM2.5, SO_2, and NOx, OEPA prepared emission estimates for the same source sectors used for the attainment year emission estimates. As for the base year and attainment year, biogenic emissions were assumed to remain constant, and were not considered in the maintenance demonstration analysis.

As done for the 2005 and 2008 mobile source emissions, OEPA used EPA's MOVES2010 mobile source model and projected traffic levels and other related mobile source factors to estimate on-road mobile source emissions for the maintenance demonstration years. The on-road mobile source emission projections were developed assuming the continued phase-in of the Federal motor vehicle emission standards. Total VMT and other on-road vehicle data for 2015 and 2022 were derived using the same modeling systems (with projected input data population, population distribution, etc.) used to derive the 2005 and 2008 on-road mobile source emissions. As with the 2005 and 2008 on-road mobile source emissions, EPA's MOVES2010 model was used to calculate mobile source emission factors. The 2015 and 2022 on-

road mobile source emissions were used to establish MVEBs for the Columbus area. See the additional discussion of the MVEBs in section V.E of this proposed rule.

Columbus area point and area source emissions for 2015 and 2022 were estimated using the 2008 attainment year emissions and growth factors for each source category within each source sector. Emission growth factors were provided by LADCO.

Tables 6 through 8 summarize the projected NOx, SO_2, and primary PM2.5 emissions for 2008, 2015 and 2022 by source sector in the Columbus area.

Table 6. Comparison of 2008, 2015, and 2022 NOx Emissions By Source Sector (TPY) for the Columbus Area

Source Sector	2008	2015	2022	Net Change 2008-2022
Point Sources	24,373.96	13,159.20	7,627.51	-16,746.45
Area Sources	5,534.32	5,577.77	5,631.84	97.52
On-Road Mobile	44,825.81	21,812.27	10,597.83	-34,227.98
Off-Road Mobile	12,728.47	8,113.60	3,519.93	-9,208.54
Totals	**87,462.56**	**48,662.84**	**27,377.11**	**-60,085.45**

Table 7. Comparison of 2008, 2015, and 2022 SO_2 Emissions By Source Sector (TPY) For the Columbus Area

Source Sector	2008	2015	2022	Net Change 2008-2022
Point Sources	94,553.48	44,636.32	23,258.56	-71,294.92
Area Sources	563.68	548.39	533.8	-29.88
On-Road Mobile	283.05	128.37	124.45	-158.60
Off-Road Mobile	729.80	259.63	149.42	-580.38
Totals	**96,130.01**	**45,572.71**	**24,066.23**	**-72,063.78**

Table 8. Comparison of 2008, 2015, and 2022 Primary PM2.5 Emissions By Source Sector (TPY) For the Columbus Area

Source Sector	2008	2015	2022	Net Change 2008-2022
Point Sources	1,553.83	1,647.99	1,745.63	191.80
Area Sources	1,620.06	1,623.79	1,627.88	7.82
On-Road Mobile	1,451.09	759.53	486.2	-964.89

Off-Road Mobile	908.32	613.95	314.31	-594.01
Totals	**5,533.30**	**4,645.26**	**4,174.02**	**-1,359.28**

Comparison of the 2008 and projected 2015 and 2022 emissions demonstrates that future NOx, SO_2, and primary PM2.5 emissions through 2022 will remain below the 2008 levels in the Columbus area. EPA concludes that Ohio had demonstrated maintenance of the 1997 annual PM2.5 standard in the Columbus area. In addition, for the reasons set forth below, EPA believes that Ohio's submissions, in conjunction with additional supporting information, further demonstrate that the Columbus area will continue to maintain the 1997 annual PM2.5 standard at least through 2023. Thus, in anticipation that EPA will complete action on Ohio's redesignation request and maintenance plan in 2013, EPA proposes to conclude that the state's maintenance plan provides for maintenance for the requisite ten years after redesignation, in accordance with section 175A of the CAA.

The rates of decline in emissions of primary PM2.5, NOx, and SO_2 emissions from the attainment year, 2008, through 2022 documented in Ohio's maintenance demonstration indicate that emission levels will not only significantly decline between 2008 and 2022, but that reductions in emissions (relative to 2008 levels) will continue through 2023 and beyond. The projected average annual rates of decline are 4,292 TPY per year for NOx,

5,147 TPY per year for SO_2, and 97 TPY per year for primary PM2.5. These rates of decline are consistent with monitored and projected air quality trends and with emission reductions achieved through emissions controls and regulations that will remain in place through 2023. Furthermore, fleet turnover in on-road and non-road vehicles that will continue to occur after 2022 will provide additional significant emission reductions.

In addition, as table 1 demonstrates, monitored PM2.5 design value concentrations in the Columbus area are well below the NAAQS in the years beyond 2008. These PM2.5 design values are trending downward as time progresses. Based on the future projections of emissions in 2015 and 2022, which show significant emission reductions in primary PM2.5, NOx, and SO_2, it is very unlikely that monitored PM2.5 concentrations in 2023 and beyond will show violations of the 1997 annual PM2.5 standard. The 2010-2012 PM2.5 design values documented in table 1, coupled with the projected drops in PM2.5 precursor emissions, imply that there will be a PM2.5 attainment margin in the Columbus area sufficient to buffer against violations of the 1997 annual PM2.5 standard in the unlikely event that emissions rise slightly in the future between 2022 and 2023.

b. CAIR and CSAPR

i. Background – Effect of the August 21, 2012, D.C. Circuit Decision Regarding EPA's CSAPR

EPA recently promulgated CSAPR (76 FR 48208, August 8, 2011) to replace CAIR, which has been in place since 2005. See 76 FR 59517. CAIR requires significant reductions in emissions of SO_2 and NOx from EGUs to limit the interstate transport of these pollutants and the ozone and PM2.5 they form in the atmosphere. See 76 FR 70093. The D.C. Circuit initially vacated CAIR, *North Carolina* v. *EPA*, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded that rule to EPA without vacatur to preserve the environmental benefits provided by CAIR, *North Carolina* v. *EPA*, 550 F.3d 1176, 1178 (D.C. Cir. 2008).

CSAPR included regulatory changes to sunset (i.e., discontinue) CAIR and CAIR FIPs for control periods in 2012 and beyond. See 76 FR 48322. Although the Columbus area redesignation request and Ohio's PM2.5 maintenance plan do not rely on emission reductions associated with CAIR, EPA notes that it is proposing to approve the redesignation request and PM2.5 maintenance plan based, in part, on the fact that CAIR is to remain in place until it is replaced by an acceptable interstate transport control rule.

On December 30, 2011, the D.C. Circuit issued an order addressing the status of CSAPR and CAIR in response to motions filed by numerous parties seeking a stay of CSAPR pending judicial review. In that order, the Court stayed CSAPR pending resolution of the petitions for review of that rule in *EME Homer*

City (No. 11-1302 and consolidated cases). The Court also indicated that EPA was expected to continue to administer CAIR in the interim until judicial review of CSAPR was completed.

On August 21, 2012, the D.C. Circuit issued the decision in *EME Homer City* to vacate and remand CSAPR and ordered EPA to continue administrating CAIR "pending . . . development of a valid replacement." *EME Homer City,* 696 F.3d at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013. EPA and other parties then filed petitions for certiorari to the U.S. Supreme Court, which the Supreme Court granted on June 24, 2013. Nonetheless, EPA intends to continue to act in accordance with the *EME Homer City* opinion.

In light of these unique circumstances and for the reasons explained below, to the extent that attainment and maintenance is due to emission reductions associated with CAIR, EPA is here determining that those reductions are sufficiently permanent and enforceable for purposes of CAA sections 107(d)(3)(E)(iii) and 175A.

As directed by the D.C. Circuit, CAIR remains in place and enforceable until EPA promulgates a valid replacement rule to substitute for CAIR. As noted above, the Columbus area PM2.5 redesignation request and maintenance plan does not rely on the emission reductions from CAIR, but attainment of 1997 annual PM2.5 standard in the Columbus area did result, in part, from

the implementation of CAIR and CAIR will contribute to maintenance in the future. Ohio submitted a CAIR SIP, which was approved by EPA on February 1, 2008 (73 FR 6034). On July 15, 2009, Ohio submitted revisions to its CAIR SIP, which EPA approved on September 25, 2009 (74 FR 48857). In its redesignation request, Ohio notes that in 2009 facilities began implementing control programs to address CAIR, and that CAIR will provide significant reductions in NOx, SO_2, primary PM2.5 emissions until such time as it is replaced by a new transport rule. CAIR was, thus, in place and getting emission reductions when the Columbus area was monitoring attainment of the 1997 annual PM2.5 standard during the 2008-2012 period.

To the extent that Ohio is relying on CAIR to support continued attainment in the Columbus area, the recent directive from the D.C. Circuit in *EME Homer City* ensures that the emission reductions associated with CAIR will be permanent and enforceable for the necessary time period. EPA has been ordered by the Court to develop a new rule to address interstate transport to replace CSAPR and the opinion makes clear that after promulgating that new rule EPA must provide states an opportunity to draft and submit SIPs to implement that rule. Thus, CAIR will remain in place until EPA has promulgated a final rule through a notice-and-comment rulemaking process, states have had an opportunity to draft and submit SIPs in

response to it, EPA has reviewed the SIPs to determine if they can be approved, and EPA has taken action on the SIPs, including promulgating FIPs if appropriate. The Court's clear instruction to EPA is that it must continue to administer CAIR until a valid replacement exists, and thus EPA believes that CAIR emission reductions may be relied upon until the necessary actions are taken by EPA and states to administer CAIR's replacement. Furthermore, the Court's instruction provides an additional backstop: by definition, any rule that replaces CAIR and meets the Court's direction would require upwind states to have SIPs that eliminate any significant contributions to downwind nonattainment and prevent interference with maintenance in downwind areas.

Moreover, in vacating CSAPR and requiring EPA to continue administering CAIR, the D.C. Circuit emphasized that the consequences of vacating CAIR "might be more severe now in light of the reliance interests accumulated over the intervening four years." *EME Homer City*, 696 F.3d at 38. The reliance interests accumulated include the interests of states that reasonably assumed they could rely on reductions associated with CAIR which brought certain nonattainment areas into attainment with the NAAQS. If EPA were prevented from relying on reductions associated with CAIR in redesignation actions, states would be forced to impose additional, redundant reductions on top of

those achieved by CAIR. EPA believes this is precisely the type of irrational result the Court sought to avoid by ordering EPA to continue administering CAIR. For these reasons also, EPA believes it is appropriate to allow states to rely on CAIR, and the existing emissions reductions achieved by CAIR, as sufficiently permanent and enforceable for regulatory purposes, such as redesignations. Following promulgation of the replacement rule for CSAPR, EPA will review existing SIPs as appropriate to identify whether there are any issues that need to be addressed.

ii. Maintenance Plan Precursor Evaluation Resulting From Court Decisions

With regard to the redesignation of the Columbus area, in evaluating the effect of the Court's remand of EPA's implementation rule, which included presumptions against consideration of VOC and ammonia as PM2.5 precursors, EPA in this proposal is also considering the impact of the decision on the maintenance plan required under sections 175A and 107(d)(3)(E)(iv) of the CAA. To begin with, EPA notes that the area has attained the 1997 annual PM2.5 standard and that the state has shown that attainment of this standard is due to permanent and enforceable emission reductions, as noted above.

EPA proposes to determine that the state's maintenance plan shows continued maintenance of the standard by tracking the

levels of the precursors whose control brought about attainment of the 1997 annual PM2.5 standard in the Columbus area. EPA, therefore, believes that the only additional consideration related to the maintenance plan requirements that results from the Court's January 4, 2013, decision is that of assessing the potential role of VOC and ammonia in demonstrating continued maintenance in this area. As explained below, based on documentation provided by the state and supporting information, EPA believes that the maintenance plan for the Columbus area need not include any additional emission reductions of VOC or ammonia in order to provide for continued maintenance of the standard.

Emissions inventories used in the Regulatory Impact Analysis (RIA) for the 2012 PM2.5 NAAQS show that VOC and ammonia emissions in the Columbus area are projected to decrease by 19,358 TPY and 119 TPY, respectively, between 2007 and 2020. See table 9 below. While the RIA emissions inventories are only projected to 2020, there is no reason to believe that the projected downward trends would not continue through 2023. Given that the Columbus area is already attaining the 1997 annual PM2.5 standard, even with the current levels of VOC and ammonia emissions in this area, the downward trends in VOC and ammonia would be consistent with continued attainment of the 1997 annual PM2.5 standard in the Columbus area. Indeed,

projected emission reductions for PM2.5 precursors that the state has addressed for purposes of the 1997 annual PM2.5 standard (see tables 6 through 8 above) also indicate that the Columbus area should continue to attain the NAAQS following the precursor control strategies that the state of Ohio and other upwind states have already elected to pursue. Even if ammonia emissions were to increase unexpectedly between 2020 and 2023, the overall emissions reductions projected in SO_2, NOx, primary PM2.5, and VOC (see 72 FR 32257, June 12, 2009) would be sufficient to offset the increase in annual PM2.5 concentrations resulting from the hypothetical increase in ammonia emissions. For these reasons, EPA believes that even a reversal of the downward trend in local emissions of ammonia (and VOC) would not cause monitored PM2.5 levels to violate the 1997 annual PM2.5 standard during the maintenance period.

Table 9. Comparison of 2007 and 2020 VOC and Ammonia Emissions Totals by Source Sector (TPY) for the Columbus Area Based on RIA Emissions Estimates for the 2012 PM2.5 NAAQS

Source Sector	VOC			Ammonia		
	2007	2020	Net Change 2007-2020	2007	2020	Net Change 2007-2020
Fires	77.48	77.48	0.0	5.62	5.62	0.0
Area	20,305.24	20,643.97	338.73	4,640.75	4,853.36	212.61
Non-Road Mobile	7,574.55	4,381.79	-3,192.76	11.20	12.80	1.6
On-Road Mobile	25,006.05	8,430.70	-16,575.35	807.16	423.61	-383.55
Point	1,423.57	1,495.24	71.67	242.31	292.41	50.1
Totals	**54,386.89**	**35,029.18**	**-19,357.71**	**5,707.04**	**5,587.80**	**-119.24**

c. EPA's Conclusion for Ohio's Maintenance Demonstration

Based on the information summarized above, we conclude that Ohio has adequately demonstrated maintenance of the 1997 annual PM2.5 standard in the Columbus area for a period of ten years from the time that EPA may be expected to complete rulemaking on the state's PM2.5 redesignation request.

4. Monitoring Network

Ohio commits to continue monitoring PM2.5 levels according to the EPA-approved monitoring plan during the maintenance period, as required to ensure maintenance of the 1997 annual PM2.5 standard. If changes are needed in the PM2.5 monitoring network, OEPA will work with the EPA to ensure the adequacy of the monitoring network.

5. Verification of Continued Attainment

Continued attainment of the 1997 annual PM2.5 standard in the Columbus area depends, in part, on the state's efforts toward tracking indicators of continued attainment during the maintenance period. Ohio's plan for verifying continued attainment of the standard in the Columbus area consists of continued ambient PM2.5 monitoring in accordance with the requirements of 40 CFR part 58 and continued tracking of emissions through periodic updates of the PM2.5 and PM2.5 precursor emissions inventory for the Columbus area, as required by the Federal Consolidated Emission Reporting Rule (codified at 40 CFR part 51 subpart A).

6. Contingency Plan

The contingency plan provisions are designed to correct, as expeditiously as possible, or prevent a violation of the 1997 annual PM2.5 standard that might occur after redesignation of an area to attainment of the standard. Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to ensure that the state will promptly correct a violation of the NAAQS that occurs after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation of the contingency measures, and a time limit for action by the state. The state should also identify specific indicators to be used to determine when the contingency measures need to be adopted and implemented. The maintenance plan must include a requirement that the state will implement all measures with respect to control of the pollutant(s) that were contained in the SIP before redesignation of the area to attainment. See section 175A(d) of the CAA.

As required by section 175A of the CAA, Ohio has adopted a contingency plan for the Columbus area to address possible future violations of the 1997 annual PM2.5 standard in this area. Under Ohio's plan, if a violation of the 1997 annual PM2.5 standard occurs in the Columbus area or if a two-year average of the weighted annual mean PM2.5 concentration at any

monitoring site in the area equals or exceeds 15.0 $\mu g/m^3$, Ohio will implement an "Action Level Response" to conduct an analysis to determine if the unacceptable PM2.5 concentration is due to an exceptional event, malfunction, or noncompliance with a source permit condition or a rule requirement. If the air quality problem is found to not be due to one of these situations, OEPA and the local metropolitan planning organization or regional council of government will determine the additional emission control measures needed to assure attainment of the 1997 annual PM2.5 standard. Ohio's candidate contingency control measures include, but are not limited to, the following:

- Diesel emission control strategies
- Alternative fuel requirements, such as liquid propane and compressed natural gas, and diesel retrofit programs for fleet vehicle operations
- Tighter PM2.5, SO_2, and primary PM2.5 emissions offsets for new and modified major sources
- Controls on impact crushers located at recycle scrap yards using wet suppression
- Upgrade of wet suppression requirements at concrete manufacturing facilities; and,
- Additional NOx RACT requirements statewide.

Emission control measures that can be implemented in a short time will be selected and will be in place within 18 months after the close of the calendar year that prompted the action level response. Ohio will also consider the timing of the action level trigger and determine if additional, significant new emission control regulations, not currently included as part of the maintenance plan, will be implemented in a timely manner and will negate the need for additional contingency measures. OEPA also notes that the following NOx, SO_2, and primary PM2.5 source types are potentially subject to additional emission control requirements: (1) Industrial, Commercial, Institutional (ICI) boilers; (2) EGUs; (3) process heaters; (4) internal combustion engines; (5) combustion turbines; (6) sources with emissions exceeding 100 TPY; (7) fleet vehicles; (8) concrete manufacturers; and, (9) aggregate processing plants.

OEPA commits to implement a "Warning Level Response" if any monitor records a weighted annual average PM2.5 concentration of 15.0 $\mu g/m^3$ or greater in a single calendar year. This trigger will result in a study to determine whether this PM2.5 concentration indicates a trend toward higher PM2.5 concentrations or whether emissions are increasing, threatening to cause future violations of the 1997 annual PM2.5 standard. If a worsening PM2.5 concentration trend is expected or if a future violation of the 1997 annual PM2.5 standard is projected

to occur, the control measures needed to reverse the trend will be selected and implemented, taking into consideration the economic and social impacts of the controls and the ease and timing of implementation. Implementation of the controls will take place no later than 12 months after the calendar year in which they are selected and adopted.

EPA believes that Ohio's contingency plan satisfies the pertinent requirements of section 175A of the CAA.

7. Provision for Future Update of the Annual PM2.5 Maintenance Plan

As required by section 175A(b) of the CAA, Ohio commits to submit to EPA an updated maintenance plan eight years after EPA redesignates the Columbus area to attainment of the 1997 annual standard to cover an additional 10-year period beyond the initial 10-year maintenance period. As required by section 175A of the CAA, Ohio has also committed to retain and implement the emission control measures contained in the SIP prior to redesignation. If changes are needed in the SIP control measures, Ohio commits to submit these changes to EPA as requested SIP revisions.

Finally, the state affirms that Ohio has the legal authority to implement and enforce the requirements of the maintenance plan SIP revision and commits to continue the

enforcement of all regulations that relate to the emission of all PM2.5 precursors in the Columbus area.

E. Has Ohio Adopted Acceptable MVEBs for the PM2.5 Maintenance Period?

1. How Are MVEBs Developed and What Are the MVEBs for the Columbus Area?

Under section 176(c) of the CAA, transportation plans and Transportation Improvement Programs (TIPs) must be evaluated for conformity with SIPs. Consequently, Ohio's PM2.5 redesignation request and maintenance plan provide MVEBs, conformance with which will assure that motor vehicle emissions are at or below levels that can be expected to provide for attainment and maintenance of the 1997 annual PM2.5 standard. Ohio's redesignation request includes mobile source emission budgets for NOx and primary PM2.5 for 2015 and 2022. Table 10 shows the 2015 and 2022 MVEBs and "safety margins" for the Columbus area. Table 10 also shows the estimated 2015 and 2022 mobile source emissions for the Columbus area. Ohio did not provide MVEBs for SO_2 because it concluded, consistent with EPA's presumptions regarding this PM2.5 precursor, that emissions of this pollutant from motor vehicles are not significant contributors to the Columbus area's PM2.5 air quality problem.

Table 10. 2015 and 2022 Motor Vehicle Emission Budgets for the Chicago Area (TPY)

Year	Estimated Emissions		Safety Margin		Motor Vehicle Emission Budgets	
	Primary PM2.5	NOx	Primary PM2.5	NOx	Primary PM2.5	NOx
2015	759.53	21,812.27	113.93	3,271.84	873.46	25,084.11
2022	486.20	10,597.83	72.93	1,589.67	559.13	12,187.50

Tables 6, 8, and 10 show substantial decreases in on-road mobile source NOx and primary PM2.5 emissions from 2008 to 2015 and from 2008 to 2022. These emission reductions are expected because newer vehicles subject to more stringent emission standards are continually replacing older, higher emitting vehicles. EPA is proposing to approve the 2015 and 2022 MVEBs for the Columbus area into the SIP because, based on our review of the submitted PM2.5 maintenance plan, we have determined that the maintenance plan and MVEBs meet EPA's criteria found in 40 CFR 93.118(e)(4) for determining that MVEBs are adequate for use in transportation conformity determinations and are approvable because, when considered together with the submitted maintenance plan's projected emissions, provide for maintenance of the 1997 annual PM2.5 standard in the Columbus area.

2. What Are Safety Margins?

As noted in table 10, Ohio has included safety margins in the 2015 and 2022 MVEBs. Ohio notes that EPA's transportation conformity regulations allow the use of safety margins in the development of MVEBs for maintenance plans. The safety margins selected by OEPA would provide for a 15 percent increase in

mobile source emissions for 2022 above projected levels of these emissions. These safety margins are only a fraction of the margins by which overall emissions in the area are expected to be below emission levels associated with air quality meeting the air quality standard.[13] Thus, these added safety margins will not result in on-road mobile source emissions exceeding the 2008 on-road mobile source attainment levels, and will not threaten exceedance of the 2008 total attainment level emissions in the Columbus area. Therefore, these safety margins are acceptable under EPA's transportation conformity requirements.

F. Are the 2005 and 2007 Base Year PM2.5-Related Emissions Inventories for the Columbus Area Approvable Under Section 172(c)(3) of the CAA?

Section 172(c)(3) of the CAA requires states to submit a comprehensive, accurate, and current inventory of emissions for nonattainment areas. For PM2.5 nonattainment areas, states have typically submitted primary PM2.5, SO_2, and NOx emission inventories covering one of the years of a three-year period during which an area has monitored violation of the PM2.5 standard. Ohio chose to derive PM2.5 precursor emissions for 2005 for purposes of meeting the requirements of section 172(c)(3) of the CAA. Ohio documented these emissions and

[13] While EPA's conformity guidance also labels this margin as a safety margin, EPA here is using the term "safety margin" to denote the margin by which Ohio's MVEBs exceed projected emissions.

submitted this documentation with the redesignation request for the Columbus area. Ohio also submitted the 2005 base year emissions inventory documentation on July 18, 2008, as an accompanying document with the state's PM2.5 attainment demonstration for the Columbus area.

1. EPA's Base Year Emissions Inventory SIP Policy

EPA's SIP policy for base year emissions inventories for the 1997 annual PM2.5 standard are specified generally in three policy statements. EPA's main SIP requirements for a base year PM2.5-related emissions inventory are specified in section II.K of EPA's April 25, 2007, implementation rule for the 1997 annual PM2.5 standard (72 FR 20586, 20647). This rule requires the base year emissions inventory to be approved by the EPA as a SIP element (72 FR 20647), and requires the emissions inventory to cover the emissions of NOx, SO_2, VOC, ammonia, and primary PM2.5 (72 FR 20648). The coverage of PM2.5 precursor emissions and emissions of primary PM2.5 is required under 40 CFR part 51 subpart A and 40 CFR 51.1008 (72 FR 20648). Detailed emissions inventory guidance for PM2.5 (and other pollutants) is contained in EPA's "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" (August 2005, EPA-454/R-05-001). Finally, a November 18, 2002, policy memorandum titled "2002 Base Year Emission Inventory SIP

Planning: 8-hr Ozone, $PM_{2.5}$ and Regional Haze Programs" recommends that the PM2.5-based emissions inventory be developed for a base year of 2002. It is noted that OEPA has generally followed all of these guidelines in the development of the base year emissions inventory for the PM2.5 SIP, with the exception that OEPA has chosen to develop a base year emissions inventory for 2005 rather than 2002. 2005 is one of the years of several three-year periods during which the Columbus area violated the 1997 annual PM2.5 standard, with 2003-2005 and 2004-2006 being violation periods. Given that 2005 is one of the years in which the Columbus area violated the 1997 annual PM2.5 standard, 2005 is an acceptable base year for the required emissions inventories.

2. 2005 and 2007 Base Year PM2.5-Related Emission Inventories for the Columbus Area

Ohio documented the 2005 primary PM2.5, NOx, and SO_2 emissions in a February 2008 document titled "Ohio 2005 Base Year PM2.5 SIP Inventory." This documentation covers the derivation of 2005 PM2.5 precursor emissions for the entire state of Ohio, and summarizes the derivation of emissions by source type and major source category. Although the February 2008 emissions inventory documentation covers the derivation of on-road mobile source emissions using EPA's MOBILE6 emissions factor model, this derivation of on-road mobile source emissions

has been supplanted by a subsequent recalculation of the on-road mobile source emissions using EPA's MOVES2010 mobile source emissions model. The revised calculation of the on-road mobile source emissions for the Columbus area is documented in a May 2011 document titled "Central Ohio On-Road Mobile Emissions Estimates." This emissions documentation was included with Ohio's PM2.5 redesignation request for the Columbus area.

The derived 2005 emissions totals by major source sector are included in Ohio's May 2011 PM2.5 redesignation request. The following summarizes the derivation of the emissions for the major source categories and the emissions totals by major source category for the Columbus area, as documented in OEPA's May 2011 PM2.5 request support document.

Emissions and source-specific data for point sources were developed for the 2002 emissions inventories by the OEPA. The primary sources of data for point sources were annual emission reports submitted by individual source facilities, which included detailed emissions data files (STARShip files). Under Ohio's emissions reporting rule, source facilities are required to submit emission reports every year, including 2005. These reports include emissions along with source activity levels and emission control information. The May 2011 emissions documentation summary covers in detail the derivation of emissions for each source type covered as stationary point

sources. The Columbus area point source emission totals are specified below, as summarized in Ohio's May 2011 PM2.5 redesignation request support document.

Area source emissions were generally derived by multiplying source category-specific emission factors by certain indicator levels of source activity (source surrogates), such as county populations, employment estimates, and commodity sales estimates. The emission estimation techniques for each source category are thoroughly documented in the May 2011 base year emissions inventory documentation. In general, OEPA has followed emission estimation procedures recommended by the EPA. Where appropriate, OEPA has defined the emission estimation approaches used to convert the source category-specific emission factors and source activity levels (derived from the county-specific surrogate/indicator levels, such as population, fuel use, employment, etc.) into county-specific emission levels. The May 2011 emissions inventory documentation does not specify the county-specific pollutant emission levels by source type, but simply summarizes the source or surrogate information and emission factor information used to derive the area source emissions. The emissions summarized here were taken from OEPA's May 2011 PM2.5 redesignation request documentation.

LADCO used EPA's National Mobile Inventory Model (NMIM) output files and processed these files through their emissions

model (generally used to prepare emissions input data files for photochemical modeling of ozone and PM2.5) to estimate 2005 off-road mobile source emissions for all non-road mobile source types except: (1) railroad locomotives; (2) aircraft operations (including aircraft auxiliary power units, landings, takeoffs, and other aircraft operating modes); and, (3) commercial marine vessels. LADCO supplied the area source emission estimates to Ohio for inclusion in the 2005 base year emissions inventory. The May 2011 emissions inventory documentation summarizes the sources of input data used to derive output emissions data from NMIM.

For the three area source types not covered by NMIM, Ohio obtained source activity data and emissions from LADCO, who contracted with several consultants to derive emissions specific to areas within the LADCO region, including areas within Ohio.

For the 2005 on-road mobile source emissions estimates, OEPA relied on modeled mobile source VMT supplied by the Mid-Ohio Regional Planning Commission (MORPC), and used EPA's MOVES2010 mobile source emissions model to calculate the emissions. MORPC used a combination of a travel demand modeling system (which covered much of but not all of the Columbus PM2.5 nonattainemnt area) and Highway Performance Monitoring Systems-derived (HPMS-derived) traffic data (used for portions of the Columbus area not covered by the travel demand modeling) to

estimate VMT and speed data by functional roadway class. These data were input into MOVES2010 to derive on-road mobile source emissions for the Columbus area.

Table 11 (taken from OEPA's May 2011 PM2.5 redesignation request document) gives the 2005 NOx, primary PM2.5 and SO_2 emissions totals by major source category for the Columbus area.

Table 11. 2005 Fine Particulate and Precursor Emissions for the Columbus Area (TPY)

Soure Type	**NOx**	**Primary PM2.5**	**SO_2**
Point Sources	25,188.87	1,478.64	111,266.53
Area Sources	5,487.2	1,552.43	566.95
On-Road Mobile Sources	53,390.61	1,660.33	864.22
Off-Road Mobile Sources	14,609.69	1,058.53	1,603.24
Totals	**98,656.37**	**5,749.93**	**114,300.88**

As noted above, EPA's emissions inventory guidelines call for the documentation of all PM2.5 precursor emissions for purposes of meeting the requirements of section 172(c)(3) of the CAA for the 1997 annual PM2.5 standard. Ohio's 2005 emissions inventory covers the emissions of primary PM2.5, NOx, and SO_2, but does not cover emissions of VOC and ammonia (NH_3), which are also PM2.5 precursors. To rectify this problem, OEPA emailed EPA on April 30, 2013, to supplement its original information on NOx, primary PM2.5, and SO_2 emissions information with

information on 2007 VOC and ammonia emissions for the Columbus area. Table 12 gives these emissions for the major source sectors.

Table 12. 2007 VOC and Ammonia Emissions for the Columbus Area (TPY)

Source Sector	Ammonia	VOC
Point Sources	232.67	1,212.46
Area Sources	5,160.67	21,415.88
Non-Road Mobile Sources	11.64	8,658.89
On-Road Mobile Sources	696.38	17,883.04
Totals	**6,101.37**	**49,170.27**

We find that the state has thoroughly documented the 2005/2007 emissions for primary PM2.5 and PM2.5 precursors in the Columbus area. We also find that Ohio has used acceptable techniques and supporting information to derive these emissions. Therefore, we are proposing to approve Ohio's 2005/2007 base year emissions inventory for the Columbus area for purposes of meeting the emission inventory requirements of section 172(c)(3) of the CAA.

VI. Statutory and Executive Order Reviews

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of

requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, these proposed actions do not impose additional requirements beyond those imposed by state law and the CAA. For that reason, these proposed actions:

- are not "significant regulatory actions" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);

- do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- do not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because a determination of attainment is an action that affects the status of a geographical area and does not impose any new regulatory requirements on tribes, impact any existing sources of air pollution on tribal lands, nor impair

the maintenance of ozone national ambient air quality standards in tribal lands.

List of Subjects

40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Particulate matter.

40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: August 7, 2013

Susan Hedman,
Regional Administrator, Region 5.

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